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PRESIDENT'S ADDRESS.

By W. J. G. DAWSON, M. D., St. Helena.

Delivered before Medical Society of the State of California, April 15, 16, 17.

It affords me great pleasure to preside over the thirty-second annual meeting of this society. The honor you have conferred in electing me your president is one that I highly appreciate. When I consider the high professional standing and executive ability of the men who have preceded me in office, I feel constrained to ask your kind indulgence and forbearance for any defects that may be apparent during my administration.

In the appointment of the various committees, I have been much gratified with the prompt and hearty cooperation accorded me, and I sincerely hope that good will and harmony may prevail throughout the entire session.

This society was reorganized and incorporated in 1870. The following year the membership amounted to 154, nearly half the practicing physicians of the state. In 1894 Dr. Kenyon, in his presidential address, stated that out of 2,700 licensed practitioners of regular medicine our membership consisted of only about 360. What do we find to-day? There are in the state 3,120 regular physicians, with only an active membership of 317, and a permanent membership of 20 in this society. There are also 8 honorary presidents, making a total of 345, a less number than in 1894. Various reasons have been assigned why the society has not increased in membership. After due consideration, I have concluded that the greatest obstacle to its progress has arisen from lack of harmony. The old scriptural saying, "Every city or house divided against itself shall not stand," is as true to-day as when first written. Harmony is considered to be the support and strength of all societies. I once heard a clergyman define a heretic as "one who does not think exactly as I do." Under this definition, we may be more or less heretics, and yet in a general way have similar convictions of right and duty. There is a grand work for the society, if each and every one will strive to advance its interests, and endeavor to gain members, especially from the outlying districts. It should be the aim of every member of this society to extend its influence, so that no worthy member of our profession can afford to ignore the privilege, or deny himself the pleasure and profit, of meeting with us.

Revision of the Constitution and By-laws.—In order to conform to the revised constitution of the American Medical Association adopted at the St. Paul meeting, in June, 1901, this society will have to change its constitution and by-laws. In accordance with a resolution presented and adopted at our meeting one year ago, a committee on revision has been appointed, which has done most excellent work, and will report at this session, for your action. It is to be expected that the new order of things will increase our number, as membership in local societies will carry with it membership in the state and national societies. In order that this rule may be made uniform and systematic, I would suggest that a special committee on formation of county or district medical societies, or, if thought possible, a paid state organizer, be appointed, as there are many counties that have no local societies at present. To bring the matter more fully before the society. with your permission I will read a letter received from Dr. George H. Simmons, secretary of American Medical Association. [Letter read.] By adopting the resolution on revision at our last meeting, our society is practically one year in advance in this movement.

Committee on Medical Legislation of the American Medical Association.—Under the new constitution of the American Medical Association, there is also a standing committee on medical legislation, consisting of one delegate from each state society, to be appointed annually by the president of the association. "It shall be the duty of this committee to consider and act upon all proposed national, state, or local legislation that in any respect bears upon the promotion and preservation of the public health, or upon the material or moral welfare of the medical profession." At my suggestion, Dr. George H. Evans, secretary of our society, was appointed a member for this year.

New Medical Law.—The new medical law went into effect in August of last year. At the first meeting of the new board of examiners but one applicant presented himself for examination, while at the preceding meeting, under the old law, the number of applicants for registration amounted to eighty-four. Comment is unnecessary.

In the circulars issued to the several committees, I suggested that the papers read before the society be short and practical, and calculated to stimulate discussion; also that each member of a committee follow as far as possible the lead of the chairman in the choice of a subject, thus approaching in character a symposium. How far this method may be found practicable will be evinced by the character of the papers presented. By devoting more time to discussion, the sessions will be made more interesting and instructive.

Tuberculosis.—The most startling statement during the year on the subject of tuberculosis was made by Dr. Robert Koch at the medical convention of the "British Congress on Tuberculosis," which met in London during July, 1901. He affirmed that there was no evidence to show that bovine tuberculosis was transmissible to man, and that the human variety can not be transmitted to cattle. This statement, which is contrary to the principles long taught and believed by other observers, has awakened a fresh interest in this very important subject, and will lead to further investigations as to its scientific correctness. We need more light on the subject, and until the question is settled, it would be wise for the sanitary inspectors and the profession at large to regard it as transmissible.

Filipino Itch.—During the past year an eruptive disease has made its appearance on this coast which resembles chicken-pox in many of its characteristics, but it is certainly not that old-fashioned disease. It has been called Filipino itch or Filipino chicken-pox. It has a prodromal stage lasting from two to four days of fever, headache, backache, nausea, vomiting, etc., but after the eruption appears, the fever disappears, and does not return. It occurs among those who previously have had chicken-pox, and almost invariably who have not been successfully vaccinated, whole families, old and young alike, being affected. I use the word successfully, advisedly, as I have seen it occur in those who had been vaccinated; but instead of the typical vesicle, the raspberry excrescence, which means poor virus, appeared. Excessive heat always weakens vaccine virus, and during the summer months, in the interior, it is apt to be impaired. This disease may be a hybrid between smallpox and chicken-pox, with a predominance of symptoms in favor of the former; in fact, in some cases, it is difficult to make a differential diagnosis. Just here I would suggest that vaccination be made more compulsory than at present by a state or national law, if necessary, as there is danger of the old virulent smallpox being revived through the growing prejudice against, and criminal neglect of, this well-known preventive.

Assassination of President McKinley.—During the past twelve months, the threshold of the new century, we were suddenly called upon as a nation to mourn the loss of a beloved President of these United States, who met death at the hands of a vile assassin. Our noble profession came to the rescue as far as human means could go. Within the space of one hour American surgeons were courageous and skilful enough to operate and repair the damage done by the fatal bullet, and it was hoped and believed that this one, the third martyred President, would recover and show to the world a living exhibition of the power and skill of up-to-date surgery. Alas! it was not so to be. Violated nature was not equal to the occasion. The wounds, so dexterously and skilfully treated as to call forth the just encomiums of the Old World, as well as the New, refused to heal, and this noble man, a very prince among men, was forced to succumb to the fell destroyer. The fiat had gone forth to our profession, "Thus far shalt thou go, and no farther." All honor to the men who strove to do their work so faithfully and well. The result should only stimulate the profession to increased zeal in the acquirement of greater knowledge in the treatment of such cases. It would be well for the laity, however, to consider that if we were always able to combat disease, or by surgical means always triumph over death, we would be gods and not men.

Dr. Joseph Le Conte.—Since our last meeting the scientific world has met with a great loss in the death of Prof. Joseph Le Conte, an honorary member of this society. Those of us who attended the meeting at Hotel Del Monte, Monterey, three years ago, will not soon forget his presence there, nor his interesting and instructive remarks on the subject of vivisection. As a fitting memorial to the grand old man, I can not do better than quote a part of a eulogy delivered by Professor Bacon to the students of the University of California: "No man I ever knew had such power of inspiring reverence and affection, even among those who scarcely knew him. We had only to go into the sphere of his transmutation to love him, and be the better for that love. In his presence all petty annoyances disappeared. That great gray head was a luminary, whose rays transformed those upon whom they fell. Why he was so potent in mere presence it is not difficult to understand. To his science he added the simplicity of soul found in a child. That simplicity, that insight into unseen things, was infinitely lovable. He was a great scientist, a great philosopher, but we all know that he was greater in another way; he kept unsoiled, unspotted, that little path of the light of God which came to him at his birth, and with the faith of a little child he walked the ways of the world, unspotted by the world. That is why he was great, that is why he was good. He was good and great of the gentleness of God."

Drs. Shurtleff and Lane.—Two other

illustrious members of this society, also, have recently been removed by the hand of death, George A. Shurtleff and L. C. Lane, both former presidents. Without wishing to encroach on the duties or province of the committee on necrology, I will merely say they both were men of great intellectual and professional attainments. Their lives were spent for the amelioration of suffering humanity and the advancement of medical and surgical science. They have served their country and the medical profession well. They have died full of honors and of years, and have left the world the better for their having lived in it, the greatest eulogy that can be proclaimed to their memory.

Educating the People on Medical Topics.—Thirty-three years ago Dr. Shrady, of the *New York Medical Record,* wrote an editorial on the above subject. He held the profession responsible for much of the quackery among people. He claimed that in every other department of science the public had been educated to discriminate between true and false doctrines, but in respect of such knowledge of medicine, we, as a body, stood to them in the same relation as we did a hundred years ago. He said that true knowledge upon all subjects must be good; that in order to educate the people upon medical topics, it was not necessary to give them more than the general principles, such being sufficient to enable them to judge properly between truth and science, and falsehood and quackery. He said that nothing would take out the conceit of a medical adventurer so effectually as a true knowledge of the dangers that may stand in the way of his advice, and recited the following anecdote to prove his assertion: "A distinguished French surgeon became interested in a village blacksmith who had performed of himself and without any knowledge of surgery some very daring operations upon his neighbors, and he determined to give him the advantages of a medical education. The offer was accepted, and the pupil spent some time in the study of practical anatomy, when of a sudden he was missed. A year or two afterward the surgeon was in the identical village, and discovered his pupil at work in his shop. When asked the question, he significantly replied, 'O my dear friend, as soon as I found out what a number of large vessels there were scattered throughout the body, especially in those parts that I had been in the habit of cutting, I did not dare to go any farther. I am now a simple blacksmith, and shall never operate again." Dr. Shrady advocated the teaching of "elementary anatomy, physiology, and hygiene in our schools and academies, and a more direct means of reaching the massess through the popular lecture system." Thirty-three years have passed, and what do we find to-day? In spite of the fact that physiology and hygiene are taught in our public schools, and the people are being educated by free lectures and other means, they are, seemingly, as ready as ever to listen to the advice of the pretender. At the close of the Civil War, I heard Henry Ward Beecher lecture before the Freedmen's Bureau in New York. He compared the slaves to the children of Israel, and said that it took the latter forty years from the time they left Egypt until they reached the promised land, and it took them twice forty to learn how to behave after they got there. So it would be, he said, with the freedmen. And so I believe it will be in the educating of the people on medical topics. Thirty-three years have passed since Dr. Shrady wrote his editorial, and it probably will take twice that time before the masses will learn to discriminate between the true and the false in medicine. This fact, however, should not discourage us in our efforts to enlighten the people. All reforms are slow in maturing. Perhaps as a profession, we, in a measure, need reforming ourselves. There is not that harmonious understanding among us that might at all times adjust difficulties in public as well as private matters, and our overcrowded ranks do not help to improve existing conditions. We are estranged from the press because we do not advertise, from legislators because they think us selfish, and even the pulpit is not as fond of us as it might be, and yet these three great powers for good should be our allies in disseminating among the people a knowledge concerning the principles upon which the true science of medicine rests.

My predecessors in office have referred to the wonderful progress made in medicine and especially in surgery during the latter half of the nineteenth century. How much more may be expected of the century on which we have so recently entered; the medical student of to-day has a grand future, but I sometimes think that, like the old poets and philosophers whose places have been hard to fill by succeeding generations, so it may prove to be in regard to the old masters in medicine and surgery; their places will be hard to fill in practical and scientific worth, and our noble profession shall hold them, like the righteous, in everlasting remembrance.

SOME REMARKS ON APPENDICITIS.

By Chas. Miner Cooper, M. B., Ch. B. (Ed.),
M. R. C. S. (Eng.), etc., Clinical Assistant to Dr. W. W. Kerr, University of California.

The Function of the Appendix.— The appendix has long been held to be a useless structure in process of involution, whose rapid elimination by nature is to be desired. Some clinicians, however, claim that the appendix is a structure of definite use to the animal economy, and that no evidences of its involution are forthcoming; a third view, recently advocated by Richard Berry, deserves some attention, viz.: That the appendix, as far as connection with the bowel is concerned, is an involutionary structure, but that it itself is destined to become separated from the intestinal canal, and to form a right-sided, solid, lymphollicular organ. A series of micro-photographs from animals, ranging from the lower series up to man, shows its gradual formation, narrowing, and elongation, with increasing accumulation of lymphollicular tissue in its walls. This, when considered with various obliterative changes of its lumen that take place, renders his suggestion interesting, if somewhat improbable.

Structures of the Right Iliac Fossa.— So frequent and so dreaded a disease has appendicitis become that undoubtedly it tends to blind us to other pathological conditions occurring in its vicinity, and though, from the standpoint of treatment, this has been a fault in the right direction, from the aspect of diagnosis it has led to many errors. We are apt to forget temporarily that the cecum, with the ileo-cecal valves, is located in the right iliac fossa, and that in severe cases of constipation, with accumulation of feces, the stress tends to tell most upon the cecum. This is evidenced by its not infrequent ulceration and rupture in many cases of malignant sigmoid stricture, the position and function of the ileo-cecal valve being directly responsible for this stress. Such being the case, it is evident that we may have pain and tenderness in the right iliac fossa greater than anywhere else in the abdomen, without the appendix itself being involved. Fortunately in these cases the absence of localized rigidity, the fact that there is no leucocytosis, helps us considerably in our diagnosis and in indicating the true treatment. It has been claimed, however, that some of these cases of constipation and accumulation of feces, immediately and entirely relieved by the administration of an enema and a purgative, have shown a marked leucocytosis. In such cases it is a question whether a small appendical abscess was not present, which, when pressure was relieved by evacuation of the colon, discharged its contents into the bowel, and consequently symptoms disappeared, owing to the free drainage thus established. In such cases one should examine the fecal discharges for the presence of pus, and, if this be negative, look elsewhere for a cause of the leucocytosis.

Positions of American and English Clinicians Regarding Appendicitis.—The different positions taken up by American and English clinicians regarding the treatment of appendicitis, and their varying statistics as regards the percentage of recoveries without operation, must have an explanation, and to one who has seen something of medicine in both countries it appears: Firstly: That acute appendicitis in England is not so common as it is in America. It might be urged that this is a case of non-recognition rather than of non-existence, but post-mortem examinations do not bear out such an inference. In this connection the comparative freedom from appendicitis of the English troops in the Anglo-Boer War is to be noted, notwithstanding the large number of intestinal cases, and the liability under service conditions to accidents and the necessity for ingesting much unsuitable food. Of several hundred cases personally seen, there was only one case of appendicitis; and in over 500 cases which passed through the Edinburgh Hospital while situated at Norvals Point, not one case of appendicitis was noted. Very little influenza prevailed, and the suggestion of Keen and DaCosta that in many cases of appendicitis there is a preliminary affection of the lymphollicular tissue in the appendix wall, is instructive in this connection. The statistics of Treves, John Hutchinson, Jr., and Byron Robinson, to be quoted later, also speak as to the greater prevalence of appendix involvement in America. Secondly: That the proportion of virulent cases is greater in America than in England. Whilst house surgeon in Edinburgh, I saw only one instance of acute perforative appendicitis, whereas in the eastern hospitals I saw three or four such cases occurring among a much smaller total number of cases. Thirdly: That, whilst in America the surgeon usually sees his patient during the first or second day of the attack, in England it is often not till the third or fourth day that the patient consults his medical attendants. At that time the patient, owing to the septic condition of the surrounding parts, which as yet have not become securely shut off from the general peritoneal cavity, waiting for the acute attack to pass off, is often favored rather than an immediate operation, unless the need for operative interference be strongly indicated; hence the less percentage of cases of acute appendicitis operated upon.

Ballooning of the Appendix.—This is a rare condition, of which I have seen one instance. It occurred in a woman who had suffered from appendicitis, and consisted in the appearance of a tumor the size and shape of an ordinary sausage in the right iliac fossa. The neck was situated at McBurney's point; the tube lay in an outward and upward direction. The tumor was tympanitic on percussion, and on firm pressure the contained air could be gradually pressed out, borborygmi being heard during the emptying. On releasing the pressure, it would quickly refill, with a continuous inflation sound. The cecum was tympanitic, and evidently distended with gas. On my showing this condition to Prof. John Chiene, he told me he had seen two or three cases of such appendix ballooning, and verified them by operation. The explanation appeared to be that the appendix had originally contained an abscess, communicating by a small opening with the cecal cavity. The fluid contents had been discharged, leaving an empty appendical sac, with a more or less valvular opening into the bowel, through which it readily became distended when gas accumulated in the cecum, the valvular character of the communication rendering its emptying more difficult. Such a condition is interesting, as the apparent mechanism of its formation renders its occurrence not improbable in certain cases of cystic appendix, and its explanation might be puzzling to one who had not seen or heard of a like case.

FREQUENCY OF APPENDIX INVOLVEMENT.

As Found in the Dead Room.—Treves states that the statistics of post-mortem examinations in the London Hospital show that the appendix is diseased in almost 20 per cent of cases. Later Jonathan Hutchinson, Jr., claims that this percentage is far too low, and that in upwards of 40 per cent a pathological condition of the appendix is present. In America, Byron Robinson states that in 230 autopsies 70 per cent show evidence of chronic inflammation of the peritoneum about the ileo-appendicular region.

As Found on the Operation Table.—Kelly and Deaver particularly have drawn attention to the frequent presence of a diseased appendix, as seen when the abdomen is opened for other reasons than an attack of appendicitis, and so common is a pathological condition found that its examination is recommended in all cases of abdominal section, unless there be some contra-indication.

As Found in Hospital Patients.—The above led the writer to examine a series of cases in the medical wards of the City and County Hospital, San Francisco, to see what percentage of cases presented any indication of appendix involvement, and to note the symptoms present, if any. The patients examined suffered from the ordinary diseases found in a medical ward, and cases of general hyperesthesia were excluded. I desire to give a preliminary report on the first fifty cases examined. Each patient was examined for: (1) Localized rigidity; (2) cecal tenderness; (3) finger-tip pressure tenderness over McBurney's point or its vicinity; (4) an attempt was made to palpate the appendix and roll it under the finger; (5) examination was made for the presence or absence of leucocytosis; (6) inquiry was made for a history of a previous attack of what could be construed as acute appendicitis; (7) inquiry for the presence of symptoms directly referable to a diseased appendix; (8) inquiry for the presence of obscure stomach and intestinal symptoms; (9) the opposite side of the body was carefully examined in all cases as a controlling index.

The results obtained were as follows: (1) Localized rigidity present in one case. The right side of the abdomen was comparatively rigid, but as the maximum rigidity was in the gall bladder region, and jaundice was present, an appendical cause could be ruled out. (2) Cecal tenderness no case. (3) Finger-tip pressure tenderness over McBurney's point on moderately strong pressure was present in 24 cases. This consisted in a severe, sharp, cutting, localized pain, lasting while pressure continued, and nearly all vouchsafed that it was as though the finger were pressing on a sore. (4) The appendix could be rolled under the finger in two cases, both of which gave finger-tip-pressure tenderness. (5) In no case could I get a history of a previous attack of acute appendicitis. (6) In 6 cases an inquiry elicited the fact that the patients often suffered localized colicky pains in the right iliac fossa. These 6 cases presented finger-tip-pressure tenderness, and in two of them the appendix could be rolled under the finger. (7) In 40 per cent of cases indefinite stomach and intestinal symptoms were present; but as what was due to the main disease of the patient, and what to possible appendix derangement, could not be separated, nothing satisfactory could be made out of this. (8) Leucocytosis was present in no case in which it could not be accounted for by the main disease.

Conclusion.—Though the number of cases examined is comparatively small, and though it is only after a considerable number of clinical and post-mortem findings that a symptom can be relegated to a definite pathological lesion, yet it seems probable: Firstly: That, in accordance with the findings of Treves, Hutchinson, Robinson, Kelly, and Deaver, there are a large percentage of people living ordinary natural lives who possess a diseased appendix. Secondly: That we are justified in arguing that the presence of this finger-tip-pressure tenderness, its character and position over McBurney's point, indicate a pathological condition of the appendix, and that in a small percentage of such cases presenting this symptom, the appendix can be rolled under the finger; moreover, its occurrence in a percentage of cases between those of Hutchinson and Robinson suggests that this sign may be the clinical index of their post-mortem findings. Thirdly: That, in view of the absence of any history of what could be construed as an attack of acute appendicitis, many of these cases of appendix involvement must be chronic or subacute from the beginning, and the interesting question arises, Do these cases, chronic from the beginning, present the same tendencies to the acute exacerbation as do those chronic cases of acute origin, or do they rather tend to run a chronic degenerative course, perhaps leading to obliteration of the appendix cavity? Fourthly: Finger-tip-pressure tenderness over McBurney's point is no proof of the presence of an acute appendical condition, unless its previous absence be known, and that, in association with other symptoms not referable to a diseased appendix, it may lead to many diagnostic errors, unless its presence in a certain percentage of cases be taken into consideration. For example, take a case of gastro-intestinal disturbance, either acute or chronic, due to gall-stones or to gall-stone cholangitis. If the case be a typical one, the presence of this finger-tip-pressure tenderness suggests appendicitis as the cause. An operation is performed, and the removed chronically-degenerated appendix apparently clinches the diagnosis. The rest in bed, together with the simple ante and post-operative diet temporarily allays the real trouble, and both surgeon and patient congratulate themselves on having brought about a cure. However, on the resumption of ordinary life the symptoms once more return, and we have to look elsewhere for a cause. Such, I feel confident, is the history of many cases, and the condition has really been gall-stones or some other extra-appendical lesion grafted onto a patient who possesses a chronically-degenerated appendix. Often the surgeon has not the privilege of following the case after operation, and he continues to look upon it as a case of appendicitis. If the real condition was not such as to cause a leucocytosis, it remains in his mind as yet another instance of non-agreement between the laboratory and the clinical findings. Fifthly: That nearly all patients in a medical ward have many gastro-intestinal symptoms dependent on the main disease; in order to determine what symptoms are referable to a chronically-degenerated appendix, examination of a large number of otherwise healthy persons is necessary. Sixthly: The absence of localized rigidity, even in those cases presenting finger-tip-pressure tenderness, is to be noted, and, as pointed out by Maurice Richardson, this is the valuable local sign indicative of acute appendicitis. One more interesting question arises in connection with chronic appendix inflammation, and that is, Is it possibly an item in a general degenerative condition, as evidenced by the presence of arterio-sclerotic and myocardial changes, or does it occur apart from such a general degenerative tendency. The presence of arterio-sclerotic changes in nearly all who presented the finger-tip-pressure tenderness suggests that some such relationship may exist.

SOME REMARKS ON THE TREATMENT OF APPENDICITIS.

From the Surgical Standpoint.—It is a question whether, in the desire to perform brilliant operations, a slow, safe procedure is not sometimes sacrificed to quickness; and it should be recognized: Firstly: That in all cases in which the least hesitation as to the necessity for drainage exists, drainage should be carried out, and no attempt made to entirely close the wound. Secondly: That, in many cases of localized abscess, in which the appendix forms part of the wall, simply opening, evacuating, and draining the abscess cavity is far preferable to an attempt to remove the appendix, which often results in the removal of barriers to the local spread of the disease. Thirdly: That in the latter class of cases insufficient drainage is bad surgery, and that a small incision opening in the abdominal wall draining a large infected area below, however excellent a condition from the standpoint of the prevention of post-operative hernia, is not conducive to the safety of the patient. I have seen several such bottle-shaped conditions, in which the leucocytosis remained high, the septic process continued, and for the relief of which a second operation had to be performed.

From the Medical Standpoint.—For a long time appendicitis belonged solely to the physician; now it seems to have become the property of the surgeon; but undoubtedly the appendix is the common property of both, and it is in those cases in which the two in conjunction decide operation to be inadvisable that the role of the physician comes in and continues to the end of the case, unless at a later period operation be conjointly decided upon. At such a time the question arises, What is the best medical treatment to pursue? The tendency of acute diseases is toward recovery, and probably many of the conditions arising at the outset of each are for a distinct purpose, e. g., the leucocytosis in pneumonia is not only the index of a good vitality, but is one of nature's means of combating the disease; similarly, the vomiting which occurs at the commencement of an acute attack of appendicitis is nature's means of preparing for and insuring the greatest possible amount of future physiological rest to the alimentary canal—rest, particularly rest of the small intestine, which is beneficial in two ways: First: It favors the formation of adhesions, and therefore the local limitation of the disease. Second: It prevents the diffusion of the casual organism, by an actively peristaltic intestine, which forms one of the boundaries of the infected condition. The old clinicians recognized the value of rest in abdominal conditions, and obtained it by the exhibition of morphin, a harmful practice, inasmuch as morphin hides the symptoms and obscures the course the disease is pursuing, thus depriving us of our clinical guides; and again, rest thus obtained is pathological, as the intestines remain more or less full of infected, decomposing, flatulent-producing ingesta. It is the treatment advocated by Ochsner, of Chicago, which imitates nature's methods of fulfilling nature's end. This treatment, as enunciated by him, consists briefly in: Firstly: Lavage of the stomach at the beginning of an attack. This saves the initial disturbance due to vomiting, and leads to a physiological rest of the stomach and intestine. Secondly: Absolute withholding of all food and stimulants by the mouth, thus maintaining the condition of rest. Thirdly: The administration of small enemata (3 to 4 ounces at a time) at intervals during the day of not less than three or four hours. It seems that, if this method of treatment be followed to a logical conclusion, in addition to lavage of the stomach, irrigation of the lower bowel should be practiced. Though only an enthusiast would claim that this method of treatment does away with the necessity for operation, yet a visit to the St. Augustine Hospital, Chicago, impresses one with its efficacy in many cases where, for some reason or other, operation is inadvisable.

Treatment of the Convalescent Stage of Appendicitis.—There is no doubt that many patients who have been tided through an attack of appendicitis are allowed to get up too soon, and to pursue their ordinary vocations, without sufficient attempts having been made to completely get rid of the inflammation and the inflammatory products around the appendix. This is probably to be accounted for by the fact that the appendix is considered both by the doctor and the patient to be a useless structure, and consequently the time and care that we spend in trying to prevent an acute endocarditis or an acute nephritis from becoming chronic is not lavished upon the appendix. But this idea can be carried too far, and we should recognize that every patient, who, after an attack of appendicitis, begins his ordinary routine life with any evidence of inflammation in that region, runs the risk of a second attack, which in all probability will be more severe than the first. Consequently, the necessity of medical attention should be enforced not only as long as there is any marked induration in that region, but as long as finger-tip-pressure tenderness over McBurney's point is a marked symptom; and if, after the means to be mentioned, finger-tip-pressure tenderness over McBurney's point still remains, the removal of the appendix should be advocated, as it probably contains a foreign body or some form of irremovable adhesion is present. During this convalescent stage rest of the patient should be maintained, the food should be simple, moderate in amount, and easily digestible. The bowels should be regulated, fermentation restrained, and the other secretions attended to, and just as the gynecologist in pelvic inflammation and the physician in pericardial and pleural conditions does all he can by local means to aid absorption of inflammatory products, so in the treatment of the convalescent stage of appendicitis similar local treatment aids in obtaining the desired result, namely, inunction, night and morning, of ichthyol ointment, 10 to 20 per cent, over the ileo-appendicular region, together with the administration of ichthyol internally. Such treatment has apparently been instrumental in causing complete resolution in two cases the writer has seen. In case of failure of the above, a fly blister in the vicinity of McBurney's point often gives the necessary fillip to the absorptive process.

In conclusion I would lay stress upon the following facts, as shown by the series of cases I examined, namely: That many persons have a chronic pathological condition of the appendix from whom no history of an acute attack, either initiatory or during the course of the chronic trouble, can be obtained. That a big percentage of patients present the phenomena of finger-tip-pressure tenderness over McBurney's point, consequently finger-tip-pressure tenderness is no true index of the onset of a new appendical trouble, and that this must be a recognized condition, unless its previous absence be known in an attempt to diagnose doubtful abdominal conditions. That such patients do not present localized rigidity, even in those cases in which the diseased appendix can be rolled under the finger. And I would draw attention to the efficacy of local treatment during the convalescent stage of acute appendicitis helping to clear up inflammatory products around the appendix as in other regions of the body.

590 Sutter Street.

RECOLLECTIONS OF THE EUROPEAN CLINIC.

[Second paper.]

By James T. Watkins, M. D., Assistant Orthopedic Surgeon to the Children's Hospital.

"THE KLINIK HOFFA."

The writer spent the months of September, October, and November, 1900, in Würzburg at the orthopedic sanitarium of Prof. Albert Hoffa. It seemed ideally situated and perfectly appointed. Nowhere in Germany can after-treatment be observed to like advantage. The patients are drawn from the well-to-do classes, many of them being foreigners. Professor Hoffa does not give any courses, except an undergraduate course in fractures and dislocations. He is the master of a direct and limpid style and a most prolific writer. Besides editing the "Zeitschrift fur Orthopadische Chirurgie," he has published an atlas on bandaging, a treatise on fractures and dislocations, his well-known "Lehrbuch der Orthopadische Chirurgie," and unnumbered pamphlets and monographs covering every aspect of his specialty. He first conceived and performed a rational operation for the cure of congenital luxations at the hip-joint, and first advanced the claims of the oblique osteotomy in the treatment of deformities of the hip.

To avoid repetition, I shall call attention only to those points wherein Professor Hoffa's methods differ materially from those described in the paper on the "Klinik Lorenz," which appeared in the March issue of this journal.

Wry Neck.—Only one case of wry neck appeared at the "Klinik Hoffa" during my stay there. The sheath of the affected sterno-mastoid muscle was opened, and the tense, fibrous muscle milked out of it for a distance of a centimeter and a half, and excised. The wound was then sewn up, and the head fixed in over-correction by a plaster-of-

Paris cuirass. This is Professor Hoffa's regular treatment, and is followed by gymnastics. In this particular case it proved necessary to divide the scaleni at a secondary operation.

Scoliosis.—Professor Hoffa's scoliosis treatment is typical of its kind. After breakfast the children have their backs massaged and are put through correction exercises similar to those described in the first paper. They then finish dressing, and go to the gymnasium, where, under the supervision of an assistant, they go through the regular set of exercises to be found in any book on kinesiotherapy, bending and rotating the head and trunk in different directions, and at the same time flexing and extending the limbs; exercises with poles and with light dumbbells are also performed. They are next suspended on the wolmb and on the double inclined plane of Beeby. Then the classical table exercises are gone through with. They are now permitted to rest awhile on a simple inclined plane provided with a head halter. After a few minutes' rest, they go to Schultess' pendulum apparatus, which fixes the pelvis and causes lateral flexion of the trunk. The children are then suspended by the head for ten minutes. Finally they are placed for twenty minutes in the detorsion frame. In this the weight of the body is largely supported by means of a Sayer's halter, the shoulders fixed by loops about them, which are united anteriorly by a strap across the chest, and are attached to the posterior upright of the frame. At the same time the seat is twisted in a direction opposite to that taken by the scoliotic vertebræ, and direct pressure is made on the costal hump by a metal pad, whose two arms are connected by watch-tackles to the anterior upright of the frame. This finishes the morning's work. It is repeated after three o'clock in the afternoon. At other times the children usually wear the "Hessing's corset." The distinguishing feature of this corset is the way in which it grasps the pelvis and receives support and fixation from it. A flattened "bow" of steel is bent to lie along the whole length of each iliac crest to within about three-fourths of an inch of the anterior superior iliac spine. In front the bows pass downward and inward, to end about one inch medially from and below the spines; behind, at the sacro-iliac joints, they turn downward almost at right angles, to end just above the gluteal folds. From these bows a flattened strip of tempered steel passes upward at either side of the spinous processes, while two lateral steels converge on each side to support an axillary crutch on their upper ends. The two halves of this frame are incorporated in a corset of strong drilling. The lacing is in front, or in front and behind. The lateral flaps over the trochanters are provided with separate lacings. Iliac bows and axillary crutches are padded with chamois skin. An adjustable leather and metal band passes from the anterior tip of one iliac bow to that of the other, fixing their mutual relation. Straps pass from the anterior horns of the axillary crutches diagonally across the shoulders and back. The difficulty encountered in making this corset lies in the exact adjustment of the iliac bows. Children presenting marked scolioses are also treated by applying corrective plaster-of-Paris jackets. They are placed face downward on Schede's suspension table. Anklets and head halter are then applied, and the section of the table upon which the child rests being removed, it is left in horizontal suspension. An assistant stands in front of the child and takes some of the strain off its head by making traction on its hands. The corrective jacket is then applied over a layer of raw cotton. It is renewed in three weeks.

Spondylitis.—In his spondylitis treatment, Professor Hoffa employs the plaster bed and the Hessing's corset. It presents no distinctive features.

Coxitis.—His coxitis treatment, like that of Professor Lorenz, is directed to getting the patient upon his feet, alleviating pain by fixation and by the removal of functional pressure. At the earliest possible moment he, however, replaces the plaster dressing with a Hessing's sheath-splint. The Hessing's "Schienenhulsenapparat," or sheath-splint, is in universal use on the continent, and merits notice. Practically it is a spika of leather and steel, made on a model of the patient's pelvis and limb. The foot, leg, and thigh are encased in leather sheaths, which are reinforced by a foot-plate and by lateral steel splints, jointed at the knee and at the ankle, which admit of mutual readjustment. The thigh piece is padded at its upper and inner border, where it supports the ischial tuberosity. The pelvic vise comprises the iliac bows which appeared in the Hessing's corset, and, in addition to them, at each side a steel strip, which passes about that half of the pelvis, just above the level of the great trochanter, from the anterior tip of the iliac bow to its posterior tip. Two perforated steel strips unite the halves of the vise posteriorly, and permit them to be approached to one another. Anteriorly a leather and metal band passes from the tip of one iliac bow to that of the other. Perineal bands prevent tilting. The sheath-splint and pelvic vise are united by a strong strip of steel, which is attached by screws to the outer steel support of the former and to both iliac bow and horizontal pelvic band of the latter. This steel uniting-piece may present adjustable ab- and adduction joints or flexion joints or both.

The fibrous ankyloses which follow coxitis are treated on the lines described in my paper on the Vienneese clinic.

In those rare cases where a bony ankylosis is present, but is not associated with a marked shortening of the limb, or where there is double-sided bony ankylosis, Professor Hoffa employs the joint resection of at least one side. He takes out a considerable piece of bone to diminish the chances of a recurrence of the ankylosis. Where the neck and head of the femur has been completely destroyed, so that the shaft of the femur is displaced high upward on the pelvis, and they are united by a sort of bony bridge, Professor Hoffa divides the shrunken, soft parts, and then performs a pelvi-trochanteric osteotomy. The operation is performed on Schede's extension table, so that the leg may be drawn down as far as possible, by means of his drum and cog-wheel traction contrivance. Without relaxing the traction, the limb and pelvis are put up in plaster of Paris. The simple subtrochanteric osteotomy is employed to correct adduction and abduction contractures, which are not associated with much shortening. Professor Hoffa is enthusiastic over the advantages of the oblique subtrochanteric osteotomy, claiming that he can diminish the shortening of a limb by that method by as much as five centimeters, that is, by two inches. The technic of the operation is as follows: The patient is placed on Schede's table and extension made on the affected limb. Then the adductors, the hamstrings, and the soft parts below the anterior superior iliac spine are tenotomized. Next a longitudinal incision is made from the trochanter to the junction of the upper and middle thirds of the thigh. It may be necessary to diminish the tension of the fascia lata by dividing it transversely. The periosteum, with the attachment of the vastus externus, is pushed back with the periosteal elevator till the bone is completely freed. An ordinary broad carpenter's chisel is applied to the bone in the bottom of the wound thus obtained, and given a direction from without and below, inward and upward, toward a point just below the lesser trochanter. In this position it is driven through the bone till the latter is sufficiently weakened to permit of its being broken with the hands. A tampon is carried to the bottom of the wound, which is covered with an aseptic dressing. The extension on the limb is now increased, and, without relaxing it, the limb is put up in plaster of Paris. In from four to six days the tampon is removed through a fenestrum in the plaster dressing. The latter is not removed for six weeks, after which massage and gymnastics soon return the limb to a condition of health. I believe that, in some cases, instead of applying the plaster dressing at once, traction to the extent of thirty pounds is put on for three weeks, and then replaced by plaster for six weeks longer. I happened not to see any of these cases. The criticism that, by the increased opening up of the medullary canal, the dangers of septic infection are increased, does not appeal to me. There is, however, danger of peroneus paralysis, as a result of too vigorous traction after division of the hamstrings. The adduction contractures, which not infrequently follow reduction of congenital dislocations at the hip-joint by the cutting method, are corrected by secondary oblique osteotomy and fixing the leg in abduction till bony union has taken place.

Coxa vara is treated in the same way.

Arthritis deformans at the hip-joint is treated by applying a Hessing's sheath-splint, by massage, and by flexion and extension exercises in a Kruckenberger pendulum machine.

In the preceding paper the mechanical method of reducing congenital dislocations at the hip-joint was described. This method is almost universally employed by continental surgeons, Professor Kirmisson, of Paris, and Professor Hoffa, of Wurzburg, being the only two distinguished exceptions. The following description of Professor Hoffa's present method of performing the operation was submitted to him for approval: The child is bathed and the affected limb ascepticized. A sterilized linen sheet is folded diagonally and passed between the child's legs, the two ends being made fast to the upper corners of the table. This is for counter-extension. The child is then chloroformed. A woolen loop is passed about the child's ankle, which is protected from abrasion by a wet towel. The woolen loop is carried to a Lorenz screw-traction machine, and traction made till the trochanter has descended to the level of that of the unaffected side.

The Operation.—An incision six to ten centimeters long is made vertically over the anterior border of the great trochanter. Next the fascia lata is split with the scissors forward and backward in a direction at right angles to the cutaneous incision. The fibers of the gluteus medius are seen in the wound. Its anterior border is sought, and the uninjured muscle drawn upward and backward with a blunt retractor. Or Professor Hoffa may go directly through gluteus medius, separating its fibers longitudinally, and retracting the one portion upward and backward, and the other forward and inward. In either event, the insertion of gluteus minimus appears in the wound. The entire muscle is drawn forward and inward by a blunt retractor. Closely hugging the femoral neck a periosteal elevator is carried downward and backward between it and the external rotators. They are also drawn upward and backward. The capsule is thus fully exposed. It is next incised in the direction of the femoral neck. A blunt-pointed bistoury is then introduced, and the wound in the capsule is enlarged downward, backward, and upward. Care is taken not to injure the anterior portion of the capsule. At this stage the extension is relaxed and the head of femur brought into the wound by rotating the thigh outward. This is done by an assistant. The remnant of ligamentum teres is excised from the femoral head and from its acetabular origin. The position and condition of the acetabulum are next determined by digital examination. The head is then allowed to drop backward, the limb being slightly adducted and flexed; and Doyen's hemispherical boring gouge is introduced. The gouge is first directed backward, downward, and inward, and then inward, upward, and backward, and in this way applied to the site of the acetabulum. When the acetabulum is sufficiently deepened, the gouge is withdrawn, bringing with it, in its interior, the excised pieces of bone and cartilage. The dislocation is then easily reduced by flexing the thigh on the pelvis to a right angle, making vertical traction and abducting the thigh, while maintaining the traction. The wound is now packed with sterile gauze, the end of which is carried down to the femoral head. A plaster-of-Paris dressing is next applied with the thigh in extension, strong internal rotation, and about thirty degrees of abduction. The plaster extends from the lower ribs to the toes. On the eighth day the wound is dressed through a window in the plaster. The second drain is not carried into the depths of the wound. Eight days later the wound is redressed, and thereafter every second or third day till it is healed. At the end of the third week the plaster is removed and massage and gymnastics begun. The principal exercises are abduction and rotation at the hip-joint. For those children with unilateral congenital dislocation, who have passed their tenth year, Professor Hoffa recommends the oblique osteotomy already described. Where older children present bilateral congenital dislocation, Professor Hoffa performs his pseud-arthrosis operation. The joint is opened through the lateral incision described above, the periosteum dissected back from the greater trochanter, and the insertions of the capsule on the neck of the femur freed. This permits the head and neck to be dislocated out of the wound. They are removed with a saw close to the intertrochanteric line. The capsule is then made tense, and its post wall divided at the narrowest part of the constriction, which regularly appears in the capsule between the acetabulum and the head of the femur. The adhesions between the periosteum of the ileum and the capsule are divided, and both flaps of the capsule are removed. The limb is now extended and abducted to bring the sawn surface of the femur into contact with the surface of the iliac periosteum, which has just been freed of the capsule. The wound is packed with sterile iodoform gauze and the limb immobilized in a plaster-of-Paris dressing. The patients are got upon their feet in about three months, though a supporting corset is worn for some time. A strong fibrous union takes place between the femur and the iliac bone. Professor Hoffa claims an excellent functional result for this operation. I have seen but one such case. It was too soon after the operation to form an opinion of the excellence of the final result, though it seemed to promise well. My friend, Dr. Bech, saw one of Professor Hoffa's pseud-arthrosis cases two years after operation, and was impressed with the excellence of the functional result. The patient herself was delighted with it.

Bony ankylosis at the knee-joint, as well as genu valgum and genu varum, are treated by osteotomy. The rest of Professor Hoffa's orthopedic methods do not appear to differ *essentially* from those described in my first paper. To be sure, he does employ the tendon graft as well as the sub-periosteal tendon implantation in the correction of paralytic deformities. This subject must, however, be reserved for a subsequent paper.

LA GRIPPE.

By W. B. Parsons, M. D.
[Missoula, Mont.]

Most of the late writers speak of this affection as an acute contagious disease produced by the bacillus of Pfeiffer. This bacillus is reported to have been discovered by Pfeiffer and Canon in 1892. While it has been found to accompany la grippe, it has not yet been demonstrated to be the cause of this disease. It would be better, therefore, with the light we now have to guide us, to designate la grippe as an infectious disease, occurring at shorter or longer intervals in various parts of the world, as a pandemic, affecting the mucous membranes of the respiratory organs and the nervous system, with possible involvement of any other tissues or organs of the body, and probably due to bacilli. Pfeiffer may have discovered the specific organism which causes influenza or la grippe, but he was not the first to announce the theory of a germ origin. This theory was maintained by many investigators more than forty years ago; while Watson held to the ozone theory, he wrote, as long ago as 1857, as follows: "Another hypothesis, more fanciful, perhaps, at first sight than these, yet quite as easy accommodated to the known phenomena of the distemper (influenza), attributes it to the presence of innumerable minute substances, endowed with vegetable or animal life, and developed in unusual abundance under specific states of the atmosphere, in which they float and by which they are carried hither and thither. Myriads of these animalcules or of these vegetable germs coming in contact with the mucous membranes, and especially with that of the air-passages, irritate (it is imagined) those surfaces, and exercise a poisonous influence upon the system. Now, the sporules of certain fungi which ruin the health and destroy the vitality of larger plants on which they pray are inconceivably small. I shall prove to you presently that vegetable effluvia are capable of producing in the human body symptoms not very dissimilar from those of influenza. Again, that the waters of this globe swarm with living creatures, which are invisible by our unaided eyes, the microscope has taught us. Others too minute to be estimated even by that wonder-showing instrument in all probability exist. We can not doubt that the gaseous fluid which surrounds this planet equally teems with living atoms. We know that multitudes of insects and cryptogamous plants, infinite in number with respect to our finite powers of computation, are sometimes suddenly hatched or developed in places which were previously free from them. It is easy to conceive that atmospheric infusoria, so to speak, may rapidly congregate or vivify in masses sufficient to render deleterious the very air we breathe. If this be so, we can understand how such a cause of disease may first act here and there, and presently overspread large districts; how it may move or be wafted from place to place or be carried about by persons; how its course and operation may be circumscribed and definite; and how some germs or ova may remain after the visit, retaining their vitality, and ready in future seasons again to start into life and activity under favoring circumstances. Taking the insect hypothesis, and knowing, as we do, that some animal poisons, that of smallpox, for example, have the singular property of multiplying themselves in the human body like yeast in beer, we may conceive that diseases produced by animalcules may thus infect the fluids of the body and become contagious in the fullest sense of that term. Lastly, the uniform duration of these epidemics has been supposed to add probability to the notion that they result from the operation of some organic principle which has its definite periods of growth and decay. All this is sheer hypothesis, but I have nothing better than hypothesis to offer you. You may choose from among them or you may reject them all, as the bent of your minds may incline. That which commends itself to my own acceptance, and which may also be most easily put to the test when the opportunity shall arise, is the ozone hypothesis."

These prophetic words of Watson indicate that many of the discoveries of late years have their starting-point in ideas or principles proclaimed by investigators of a former generation; and this fact should teach us not to appropriate to ourselves all the credit of recent progress in medical science.

Whatever may be the cause of la grippe, it certainly inhabits the atmosphere alone. Whether it is generated here or derived from other sources and distributed through this medium, future investigation must determine. Meteorological and telluric influences, or different conditions of the atmosphere as regards temperature and moisture, exert no other than modifying effects on this disease. The theory of ozone, advocated by Schoenbein and Watson, with the light we now have on the causes of disease, can not claim any attention. On the other hand, its oxidizing properties should render it antagonistic to toxic conditions of the atmosphere. The germ theory is more rational than any other, and is at the present time generally accepted. The predisposing causes are few. Young adults and aged persons are most liable to attacks, for the reason, perhaps, that the former carelessly expose themselves and are ignorant of the dangers inseparable from the operations of la grippe, while the latter, from the exhausted or worn-out condition of their organs, have less power of resistance to meet the insidious and progressive inroads of the disease. The initial operations of la grippe are generally limited to the mucous membranes of the respiratory passages and the nervous system. A rigor, followed by more or less fever, with headache, muscular pains, watery eyes, nasal, laryngeal, and possibly bronchial, irritation; a persistent, dry, peculiar-sounding cough, and an unaccountable nervous prostration mark the invasion of this disease. This disease is protean in its manifestations, which vary from the mildest catarrhal type to the gravest congestive and inflammatory forms, involving many different tissues and organs of the body. The force of the disease may fall on the respiratory organs, the gastro-intestinal tract, or the heart; it may also assume a typhoid or rheumatoid type; but in none of its forms do we find anatomical lesions commensurate with the gravity of functional disturbances. The most dangerous complications of this disease are pneumonia and heart failure. By guarding against such involvements, the patient may look forward to a speedy recovery.

The beginning of the attack requires prompt and efficient treatment. The patient should be kept in his bed until the acute stage is passed, and then should be advised to remain in the house until he has thoroughly recovered from muscular and nervous exhaustion. Neglect of this precaution may occasion a relapse, with dangerous, if not fatal, consequences. In neuropathics and aged, debilitated subjects enforcement of the above advice is imperatively demanded. The medical part of the treatment, especially in the incipiency of the disease, is simple but important. Bearing in mind that in this disease there is always a tendency to a rapid lowering of all the vital processes, the selection of medicinal agents must be made with a view of counteracting that tendency, as well as combating other urgent symptoms. While every case must determine the details of treatment, the writer has found the following prescription in the early stage of the disease to approach nearer a specific than anything he has ever tried:—

℞: Ammon. Chlor.......................... ʒij
Cordial Codliver Oil Comp. (Hagee)..℥viij

M. Sig.: Take a tablespoonful four times a day, alternating with a five-grain pill of quinin, and continuing preparation until restoration is complete.

This prescription should usually be preceded by a brisk mercurial purgative. Of course, this treatment is intended for an adult in the average physical condition of this class of patients. After complications have developed, the treatment must be along the line of special indications.

ABSTRACT OF PAPER ON THE PREVENTION OF TUBERCULOSIS.

By Edward Von Adelung, M. D.

Read before the Public Health Association of California, San Francisco, April 15.

While it is generally recognized both by the profession and by the public that consumption is a common disease, the great importance of tuberculosis in its relation to the public health is scarcely comprehended. Yet a very cursory examination of the subject suffices to reveal facts of a most alarming nature, and to render apparent the terrible mortality and the attendant economic waste caused by the tubercle bacillus.

When one considers that the tubercle bacillus kills more than one-seventh of the race; that the mortality in the United States may be impressively expressed by stating that 150 American regiments march away each year to certain premature death, or, to state it still more strikingly, that the equivalent of a city of 150,000 inhabitants is wiped off the map of the United States every year; when one considers these facts, he begins to comprehend the stupendous proportions of the tuberculosis problem. These facts assume a still more cruel aspect when placed alongside the authoritative statement that "tuberculosis is not inherited, is acquired by direct transmission of the tubercle bacillus from the sick to the healthy, and is a distinctly preventable disease."

On one question I feel that all stand in accord; we all agree that the condition of affairs is serious enough to demand that something be done, that some measures be taken to control the spread of tuberculosis in this state. In the face of a mortality from a preventable, communicable disease, such as tuberculosis presents, it would be a reproach upon the medical profession of this state if no measures could be taken to control the spread of that disease—a distinctly preventable disease. The Pennsylvania Society for the Prevention of Tuberculosis has distributed tens of thousands of educational tracts. New York, Boston, Chicago, Buffalo, and other cities have done the same. The German Government recently distributed some millions of leaflets among its people conveying information regarding tuberculosis. Quoting Professor Koch's words at the recent British Tuberculosis Convention: "A consumptive who coughs out tubercle bacilli is not necessarily a source of infection on that account, so long as he takes care that his sputum is properly removed and rendered innocuous." And Dr. Hermann Biggs, of New York, a sanitarian of deservedly international repute, says: "If the matter coughed up be properly destroyed, a person suffering from consumption may frequently not only do his usual work without giving the disease to others, but may also thus improve his own condition and his chances of getting well." In many of the leading cities, such as New York, Boston, and Toledo, tuberculosis is a notifiable disease by law.

In view of the importance of destroying tuberculous sputum, anti-expectoration legislation assumes considerable importance. A large number of cities in this country now have statutes prohibiting expectoration in public places, and the impartial enforcement of these laws in America against rich and poor alike has provoked complimentary comments from the highest European authorities. The enforcement of such laws is especially desirable during the summer season, when the sputum accumulates and dries quickly, and dust fills the air. As a valuable, if not necessary, adjunct to the efficiency of such expectoration laws, the providing of a sufficient number of conveniently-placed public cuspidors is earnestly recommended. Many people are obliged to spit while in public places, and since spitting on the street is but little less sanitary than spitting upon the sidewalk, public cuspidors, properly supplied with some fluid, and frequently cleansed, appear to be a very efficient means of meeting the problem. Expectoration regulations should be extended so as to apply to all public conveyances, hotels, lodging houses, churches, halls, etc.

It is unnecessary for me to speak of food inspection, as that subject has been well exploited. But it may not be amiss, especially as it is not improbable that the tonsil is a portal of infection, to call attention to the careless practice of exposing to the dust of the streets, fruits and other foods that are commonly eaten without being cooked. If for no other reason than simple cleanliness, dealers should be required to protect such foods from dust contamination more thoroughly than is done at present. Quarantine, isolation, placarding, and kindred measures applied to tuberculosis I mention merely to condemn. As pointed out before, a consumptive who disposes of his sputum properly in no way endangers those about him, and quarantine is no more necessary in his case than in a properly-conducted case of typhoid fever. I believe that the public should be taught to regard consumption in its true light, as a disease that can be avoided without ostracizing consumptives, as a disease that is curable certainly in the early stages by the simplest means, and not as a monster at the sight of which they should flee. Our people, and, I suspect, our profession, need to give more importance than they now do to efficient prophylactic measures of a broader scope. The baneful effect of alcohol in reducing the systemic resistance to the invasion of the tubercle bacillus needs to be dwelt upon. It has been shown that the increase of mortality from tuberculosis in France is in exact proportion to the increased consumption of alcohol. If the fight against tuberculosis is to succeed, our people must have more sunlight, more fresh air, with fewer working hours, and less alcohol. The reduction of the working hours effected by the labor unions is assisting, no doubt, in the reduction of the mortality from tuberculosis. Darkness, dampness, lack of ventilation, uncleanliness, and excesses of all kinds, but especially alcoholic, are the handmaids of tuberculosis. Sunshine, fresh air, cleanliness, and temperance, are its arch enemies. Let this creed be once well instilled, and the people will quickly work out their own salvation. A new style of architecture designed to secure better ventilation and more sun in living-rooms is confidently awaited. Possibly the roof will assume a new function beside that of keeping out the rain, and will become the means of gathering and distributing through the dwelling the germ-destroying rays of the sun. Conceived largely, suffering and premature death are punishments for the transgression of natural law. And so tuberculosis is a ministering angel in disguise, for it tends, ultimately, to force better drainage, better dwellings, better modes of living, more fresh air, sunshine, cleanliness, rest and recreation.

Dr. von Adelung concluded his paper with the recommendations that the convention request each county medical society in California to devote one meeting to a discussion of the prevention of tuberculosis, and that the state medical society give the subject of tuberculosis a lengthy consideration at its 1903 meeting.

MILK PRODUCTION UNDER HYGIENIC CONDITIONS.

By Archibald R. Ward, Instructor of Veterinary Science and Bacteriology, University of California.

Read before the Public Health Association of California, San Francisco, April 15.

The subject of the bacterial contamination of the milk supply in its relations to disease is one that well deserves attention by health departments. Milk occupies a unique position among human foods by reason of its popularity among all classes, its perishable nature, and also because it is consumed in a raw state. Economic conditions are such that it is handled by a poorly-paid class of laborers, who are unlikely to observe desirable sanitary precautions without close supervision.

A person speaking upon the subject of milk bacteriology incurs great risk of leaving the impression upon the listener that he is a "faddist" and alarmist. Because knowledge of bacteriology has progressed mainly along pathological lines, the fact that most bacteria in milk are harmless to the healthy adult is not well understood. There is a popular impression that it is a serious thing to "swallow a microbe," and that all milk containing bacteria is bad. Nothing could be farther from the truth. Objection to the use of milk as a food for adults on the ground that it contains a few hundred thousand bacteria per cubic centimeter is based upon a repugnance to such food rather than conclusive evidence of its ability to produce disease.

In the case of milk for infant feeding, authorities are agreed that excessive pollution by bacteria is positively harmful. Clinical experience has shown that during hot weather, especially, milk teeming with bacteria and their products is a serious menace to the health of milk-fed infants. Statistics show that diseases of the digestive tract account for a large percentage of deaths among infants. All this is explained upon the ground that in the case of the infant, the milk passes through the stomach so rapidly that gastric digestion can not be depended upon as a barrier against bacterial infection.

In view of these considerations, it may be pardonable if I inflict upon you a brief resume of the facts concerning the sources of contamination, and indicate the practicable methods of minimizing such pollution. That the first milk drawn from each of the cow's teats contains micrococci, which are normal invaders of the lactiferous ducts, is a matter recently demonstrated. It has been shown that cows with large, easy-milking teats give milk containing more of these organisms than cows with teats provided with tight sphincter muscles at the extremity of the teat. In at least one dairy in the east, the cows are selected with regard to this matter. Rejection of the first few streams of milk is practiced in some dairies, to reduce the bacterial content of the milk. There is little need of calling attention to the unnecessary contamination resulting from lack of care in scalding milk tinware and strainers. The subject may be dismissed with the comment that such simple precautions, if neglected, lead to serious contamination. The shower of manure particles, hair, etc., that usually falls into the milking-pail during milking can be prevented by grooming the cow some time before milking, and by dampening the udder with a cloth. Milking-pails specially constructed with reference to exposing as little surface for the reception of dust as possible, aid in minimizing the contamination by fecal bacteria at milking. The dust ordinarily present in cow stables can, in many cases, be avoided by intelligent attention to details. In some dairies the cows are milked in a one-story structure constructed with special reference to avoiding the presence of dust in the air. It is desirable that milk be strained, cooled, and bottled with reasonable celerity. Once in a bottle, and kept cool, milk is protected from further pollution. For this reason it is unnecessary to call attention to the desirability, from a hygienic point of view, of having milk marketed in bottles.

The possibility of the transmission of cattle diseases to man is a subject of popular discussion at the present time. Dr. Robert Koch, in his well-known paper read at the London Congress of Tuberculosis, did not intend to disparage the efforts of health departments to prevent the marketing of milk from tuberculous cows. His statements have been welcomed and made the most of by the opponents of the anti-tuberculosis crusade. The final settlement of the question of the transmissibility of bovine tuberculosis to man will have little effect upon the milk-supply problem. The public will object to consuming milk from tuberculous cows upon the ground of the natural repugnance of civilized man to a food derived from a diseased animal, even if it is not strictly infectious. This same point of view governs the inspection of meats by the federal inspectors at abattoirs. Carcassses showing lesions of hog-cholera are condemned as unfit for human food, for the all-sufficient reason that food products from diseased animals are unwholesome, rather than upon the ground of the susceptibility of man to this disease, which, of course, does not exist.

Inflammatory diseases of the cow's udder, with which are associated streptococci, are considered a menace to the health of infants. Inasmuch as streptococci are found in certain disorders of the digestive tract in infants, the rejection of the milk of cows suffering from mammitis becomes imperative. Numerous typhoid epidemics have been traced to the pollution of milk by water containing the typhoid organism. Slovenly dairymen have been known to regularly rinse milk vessels in well water, or, even worse, without scalding. The practice of intentional adulteration of milk by water, too common in San Francisco, need but be mentioned in this connection. Diphtheria and scarlet fever are diseases very commonly spread by milk from man to man. There is a large number of cases on record in which diphtheria epidemics have been traced back to a person milking cows.

More or less successful efforts have been made to devise means for removing bacteria from milk or for killing them. Running milk through a clarifier, i. e., a centrifugal separator run at a speed swift enough to throw out considerable numbers of bacteria, pus cells, and larger masses of filth, is useful but incomplete. The process can not be relied upon to remove bacteria with any degree of thoroughness. Filters of sand, felt, or of cotton are subject to the same criticism. The use of chemical preservatives, chief among which is formalin, can not be tolerated in a food for infants. Pasteurizing, i. e., heating milk to a temperature fatal to all but spore-bearing bacteria without imparting a cooked taste, is highly desirable. Milk so treated is free from the danger of communicating the infectious diseases already enumerated, and has the additional advantage of keeping sweet longer. There is objection to feeding infants on Pasteurized milk which was originally contaminated with bacteria and their products. It is said with truth that such milk contains the dead bodies of the bacteria, together with their products, both of which have been found injurious to infants. There is considerable divergence of opinion among the medical profession concerning the comparative digestibility of raw and Pasteurized milk. Sterilized or boiled milk is so profoundly altered in its constitution and nutritive properties that it can not be fairly compared with raw milk. It is generally conceded that the proper natural food for infants is milk as free from bacteria as possible, and that measures designed to exclude bacteria must be relied upon to accomplish this result. Dairies conducted with a view to excluding bacteria from milk are not easily put into successful operation, chiefly because of the competition in the milk business. Few men possess the technical knowledge necessary to direct such a business, and even if such an undertaking were inaugurated under private control, it would not succeed in the face of competition. We need in California a limited amount of milk produced under irreproachable conditions, to be sold at a price commensurate with the care bestowed upon its production. In several of the larger cities of the East, dairies are in operation under the direction of an expert commission responsible to some body of men enjoying the respect and confidence of the community. For instance, the Philadelphia Pediatric Society undertakes to furnish a certificate of approval to all dairymen complying with its requirements concerning the precautions essential to the production of good milk. The society appoints a commission consisting of a bacteriologist, chemist, and veterinarian, all men of recognized standing. These three specialists report to the society at regular intervals upon the condition of the dairies and the character of the product. The expense of inspection is borne by the dealer and indirectly by the consumer. Compliance with the requirements of the society necessitates a greater cost to the consumer, but the justice of the increased charge is not seriously questioned by those familiar with the conditions. The endorsement by the society has a distinct commercial value to the dealers, and is highly prized. Similar commissions are improving the milk supply of New York and Boston.

The model dairy endorsed by an authoritative society has several commendable features that warrant its introduction in any large city. Physicians are enabled to recommend to their patients a milk produced under the most favorable conditions for insuring a healthful product. To the specialist in pediatrics, such an opportunity is of great importance. But the greatest value of the model dairy lies in its power of quietly educating the consumers and milk dealers. The writer believes that the scheme offers a peaceful means for accomplishing desirable reforms. The amelioration of our city milk supplies can be best accomplished by encouraging the establishment of a few model dairies, as object lessons for the other dealers and the public. As soon as the public learns to appreciate good milk, it will be willing to pay for it, and dealers will be ready to supply the demand.

SPINAL ANESTHESIA WITH TROPACOCAIN IN GENITO-URINARY SURGERY.

By M. Krotoszyner, M. D., San Francisco.

Read before the Medical Society of the State of California, April 15, 16, 17.

As early as 1885, in the first publication upon spinal anesthesia that appeared in medical literature, Corning[1] says, "Whether the method will ever find an application as a substitute for etherization in genito-urinary or other branches of surgery, further experience alone can show." Since August Bier's first experiment with spinal anesthesia, he emphasized the fact that operations in the pelvis, perineum, and the anus are fitted for this mode of anesthetizing, as complete analgesia may be obtained for these regions through small and comparatively undangerous doses of the anesthetizing drugs.

My own experience with spinal anesthesia dates back about two years. At that time I witnessed several operations under spinal anesthesia by Dr. Tait, who, with Dr. Caglieri, wrote a remarkable treatise[2] upon the subject. I soon afterwards proceeded to experiment with spinal cocainization in some of my old prostatic patients, where a general anesthetic appeared to be dangerous, on account of heart and kidney complications. My experience with the method was not very satisfactory, on account of the very distressing and often dangerous symptoms which most of my patients exhibited during and after spinal cocainization, and at the last meeting of the California State Medical Society held in Sacramento I said, discussing Dr. A. W. Morton's[3] paper on spinal cocainization, "I have used this method, . . . and have noticed such violent and distressing symptoms . . . that I would not wish to repeat this method of anesthetizing unless I am compelled to." Such and similar objections to spinal cocainization are voiced by various authors. Mikulicz,[4] for instance, reports among 35 cases of spinal cocainization 10 times distressing symptoms during and 8 times after the operation. The horrible picture of intoxication, so often observed after spinal cocainization, is best described by Kammerer:[5] "Suddenly the patient becomes pale; the pulse becomes rapid and small; the patient yawns and makes deep and difficult inspirations, until dyspnea sets in; pulse thready, not palpable; profuse perspiration, nausea and vomiting; spastic contractures of lower extremities; pulse rate, that had increased to 140 to 160, sinks down to 55 to 70; collapse at different periods. These symptoms may last a fraction of or a very few or even 15 or 20 minutes."

I had therefore almost decided to abandon spinal anesthesia entirely, when my attention was shortly afterwards called to an article of Willy Meyer, of New York,[6] who had operated on three cases under spinal anesthesia with tropa-cocain, and at the same time Schwartz' publication upon the use of tropa-cocain in the place of cocain fell into my hands. Schwartz arrived, through carefully-conducted experiments, at the result that .05 tropa-cocain injected into the subarachnoid space produced as perfect an analgesia as the ordinary cocain, while none of the disagreeable and dangerous symptoms experienced with the ordinary cocain were noticeable.

Tait, who had experimented with several other drugs, in order to avoid the toxic influence of cocain, began at the same time to use the tropa-cocain, and called my attention to its advantages over the cocain, especially in its not being accompanied and followed by the above-mentioned distressing and dangerous symptoms. I had at that time under my care an extremely sensitive patient of 75 years, with a suprapubic fistula of 4 years' standing, as a result of suprapubic lithotomy, from which the urine continually flowed down alongside the suprapubic tube over the patient's thighs, causing a very annoying eczema. Rectal examination revealed a very large prostate, the middle lobe of which obstructed the entrance of the bladder. On account of the patient's advanced age and his faulty kidneys, an operation under local anesthesia in the hypersensitive patient seemed to be impracticable. I therefore decided to perform a Bottini operation under spinal anesthesia with tropa-cocain. I injected .05 or $\frac{5}{6}$ of a grain of tropa-cocain, and started five minutes after the injection to operate. In rapid succession I introduced steel sounds of increasing size, in order to dilate the urethra, that had not been used for several years as a urinary channel; then I introduced the Bottini instrument, and made three very extensive incisions into the three lobes respectively, leaving a catheter in the bladder afterwards. During the operation the patient was occupied in conversation with a friend; his pulse did not increase in rate nor deteriorate in volume; no nausea; no vomiting; respiration normal; not the least sign of pain during cauterization of the gland. The patient did not show any disagreeable after-effects from the anesthesia; no rise in temperature, no headache. I repeated in this patient twice the same method of anesthesia, the first time about six weeks after the first Bottini operation, in order to close the suprapubic fistula; the second time, two months after the second operation, in order to perform a second Bottini operation for the reestablishment of the spontaneous micturition through the natural passages after closure of the suprapubic fistula. Such a result could never have been obtained without the aid of this method of anesthetizing, because I do not think the patient could have survived three general narcoses, neither would a careful surgeon have attempted these operative procedures, on account of the dangers connected with general anesthesia in old and decrepit individuals. Since this experience I have done almost all my genito-urinary surgery under spinal anesthesia with tropa-cocain, and can recommend it highly. I have operated so far in over 120 cases. Most of my work was done on the bladder, scrotum, penis, etc.

Tropa-cocain is chemically benzol pseudotropin hydrochlorate, and has the formula $C_8H_{14}\ \mathrm{No}(C_6H_5CO)\mathrm{HCL}$. This alkaloid occurs with cocain and other bases in the small Java coca leaves, prepared synthetically by Liebermann. It forms white needles, melting at 271° C., or 519.8° Fahr., and is readily soluble in H_2O. In solution of 2 to 5 per cent it produces a rapid anesthesia; is less toxic and more reliable than cocain (Ferdinande and Chadbourne).

I have always used for my work the glass tubes as prepared by Dr. Tait. Each tube contains 1 c. c. of a 4 per cent solution of tropa-cocain; both ends of the tube are sealed, then placed in a bath of water and glycerin for 1¼ hours, at a temperature of 120° Fahr., and cooled off. The glass is filed off at a convenient place, so that it may be broken when the contents are needed for injection. I shall not describe here the instrumentarium and technique of lumbar puncture, as those points are repeatedly dwelt upon by various authors in former publications. I generally obtained complete analgesia for my field of operation by the above-mentioned dose of tropa-cocain, and generally started the operation ten minutes after the injection. In some cases, where I injected less than 1 c. c. of the 4 per cent solution, or even only half the dose, I had to wait fifteen, twenty, or twenty-five minutes until analgesia was obtained. In two cases of my whole material no analgesia occurred, and the operation had to be done under general anesthesia. In both instances the escaping of several drops of cerebro-spinal fluid made it sure that the point of the needle had punctured the subarachnoid space, and, in the case of a very nervous woman with vesical spasms, certain symptoms,—slight icterus, with rise of temperature until eight days after spinal puncture,—were observed, that I was inclined to ascribe to the lumbar puncture. In nervous and excitable patients occasionally the operation was somewhat impeded by great restlessness of the patient, which sometimes could be arrested by placing a mask over the patient's face, simulating chloroform anesthesia. Whenever those patients after the operation were asked if they had felt any pain, they invariably denied it. We never have used of late a stimulant hyperdermically or per orem before or during the operation, as generally no shock or other distressing symptom caused by the puncture or the injected drug was noticeable. One assistant is placed at the head of the patient to carefully watch respiration, pulse, pupils, etc. A nurse is detailed in some instances to engage a nervous patient in pleasant conversation, and to distract his attention from the field of operation.

An important point that so far has not been brought out is that this method of anesthesia permits us to obtain the patient's consent for removal of an organ during the operation, where in general anesthesia a second operation would be necessary, because the patient's consent for a more radical procedure could not be obtained. To illustrate this point I may be permitted to give brief notes upon one interesting observation. A man of 33 consulted me for a subacute anterior urethritis, with gonococci and epididymitis on the right side. Upon taking the history of the case, I ascertained that the right testicle had been swollen for several months previous to the present attack of gonorrhea, which at that time lasted for about three weeks. As no benefit could be effected by ambulatory treatment, the patient was persuaded to enter the hospital, where, in spite of rest and careful treatment, the swelling of the right epididymis increased; a few days later an effusion into the tunica was noticeable, which rapidly increased; puncture was made for diagnostic purposes, and 1 c. c. of a sero-purulent fluid obtained, that contained pus cells, tubercle bacilli, streptococci, but no gonococci. The operation under spinal anesthesia revealed an epididymis and testicle that were entirely riddled by tubercular abscesses; miliary tubercles covered the cord and surrounding tissue up to 4 or 5 cm. from the epididymis. I informed the patient of the condition of the organs mentioned, and obtained his permission for castration, which I did, following up the vas deferens to the internal inguinal ring.

I am certain from my experience that spinal anesthesia with tropa-cocain will prove to be a useful and reliable method in our field of surgery, though I will admit that disagreeable symptoms will occasionally be noticeable from its use. Repeatedly in my cases a slight dyspnea was observed; the pulse rate increased to 100, in two cases to 120; involuntary defecation occurred in three cases, and in the case of the above mentioned, a woman where no analgesia was effected, profuse vomiting followed the injection of the drug. But all those disagreeable sequels were the exception; as a rule, the analgesia was complete, and the operation could be finished without any interruption caused by the intra-spinal injection. The same favorable results were obtained as regards after effects. I have never observed the excruciating headache, so often noticeable, after spinal cocainization, and I am inclined to believe with Bier[8] that neither the difference in pressure of the cerebro-spinal fluid nor circulatory disturbances, but the toxic effect of the cocain, is the real cause of this distressing symptom. In regard to increase of temperature as a sequel of spinal anesthesia with tropa-cocain, I can not express a decided opinion. In the few of my cases where it occurred, I was not certain whether the condition of the wound was not the cause of this symptom. The majority of my operations lasted less than an hour. Only in one case, an external urethrotomy, with total obliteration of the urethral canal, we worked one hour and forty minutes, with complete analgesia after injection of .05 tropa-cocain. The only real danger, to my mind, connected with this method of anesthesia lies in the possibility of sepsis to the spinal canal. Therefore I would not attempt spinal anesthesia in a private dwelling. In the hospital I have the patients in whom spinal anesthesia is to be made prepared as for a laparotomy. The day before the operation the patient gets a full bath; his back is shaved, and a sublimate pad applied upon it. On the operating table the field of the puncture is sterilized as carefully as the site of an abdominal section. I hope that you will test this method unbiasedly in your genito-urinary surgical work, so that well-established indications for this method of anesthetizing may be drawn from our future experience. My work teaches me that the method seems to be impracticable in very nervous and excitable patients. I can highly recommend it, though, for old and decrepit individuals, where a weak heart or unreliable kidneys would contra-indicate a general anesthesia. I have not had a mishap in my spinal anesthesia with tropa-cocain so far, and I consider this method not to be more dangerous than any other form of anesthetizing, while its advantages over general anesthesia for the patient are unquestionable.

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REFERENCES.

1. J. L. Corning, N. Y. Med. Jour., Oct. 31, 1885.
2. Dudley Tait & Guido Caglieri, Transac. of the Med. Soc. of the State of Cal., 1900, p. 266.
3. A. W. Morton, Transac. of the Med. Soc. of the State of Cal., 1901, p. 228.
4. I. V. Mikulicz, Arch. f. Klin. Chir., vol. 64, p. 757.
5. F. Kammerer, N. Y. Med. Monatsschr., 1901, p. 1.
6. W. Meyer, Med. News, vol. 78, p. 569.
7. Karl Schwartz, Centralbl. f. Chir, 1901, No. 1.
8. Aug. Bier, Arch. f. Klin. Chir., vol. 64, p. 236.

ERRORS OF REFRACTION AS A CAUSE OF EYE DISEASES.

By W. A. MARTIN, M. D., San Francisco.

Read before Medical Society of the State of California, April 15, 16, 17.

That errors of refraction are a direct cause of diseases of the eye is, to say the least, questionable. We have to arrive at our conclusions in determining how much of a role they play in pathological conditions of the eyes by a long chain of reasoning, while in a great many instances we must be satisfied with the Scotch verdict of not proven. The principal proof that the uncorrected error of refraction is an important if not the chief factor in the diseased conditions is that all our treatment is in vain until such error is corrected, which treatment in itself is frequently all that is necessary to restore the eyes to a normal condition.

In dealing with the external or extrinsic conditions of the eye, we find quite a number of pathological conditions traceable to a small error of refraction; for instance, the eye strain causes an excessive lachrymation and a conjunctivitis; these simple conditions prepare the soil for the propagation of the different germs, whose presence is accountable for the various classified forms of conjunctivitis. The same conditions give rise to diseases of the glandular structures in the lids, such as hordeoli, chalazion, and blepharadenitis; another, of the adnexa of the eye, the lachrymal sac, is also indirectly influenced by the excessive flow of tears, and thereby becomes diseased. This latter condition owes its origin more frequently to the probing of the inexperienced oculist or general practitioner, who wrongly attributes the excessive lachrymation to a stenosed duct; several instances of this kind have come under my own observation. Eczema of the lids is also a common accompaniment of the excessive lachrymation. Corneal troubles are so frequently associated with errors of refraction that, when found in conjunction, we must attribute them to the resultant eye strain. In spite of the most exact corrections, we have occasional patients who are unable to apply themselves closely without the appearance of ulcers, while at the same time, if they give the eyes rest, they remain free; the cause and effect are too clear to the ordinary observer to be ignored. The connection between the error and ulcer is an indirect one, and one difficult to trace, and it is not my intention to advance any theories at this time. The systemic cause of interstitial or parenchymatous keratitis has been so clearly proven that one would hardly think of associating it with an error of refraction, but nevertheless a correction of the same, if present, will often shorten the duration of the disease. I recall one instance of two sisters, the first and third in a family of six, in whom I could find absolutely no signs of an inherited condition to account for an interstitial keratitis. The older sister, aged seven when first seen, had a well-developed case of interstitial keratitis, which recovered slowly under constitutional treatment, the trouble lasting over eight months. I was waiting for the cornea to clear before refracting her, but meanwhile the same condition developed in the other eye. I corrected the error of refraction as nearly as possible under the existing conditions, and the second eye recovered in less than a month. A year later the sister was brought to me, with the same condition developing in the right eye. I immediately refracted her, and the trouble cleared up in the eye in about two weeks, and has not developed at all in the second eye. I have made it a practice since then of examining the refraction of such cases when first seen, and am certain that in many instances I have thereby shortened the duration of the disease. The error of refraction that is commonly found in the eyes of such patients is usually attributed to the weakening of the corneal structure, but I have no doubt that in many instances it existed previous to the trouble; and the fact that the trouble so frequently shows itself about the sixth or seventh year, when children are first entered in school and begin to use their eyes for close work, would indicate a close connection between the eye strain and interstitial trouble.

The next structure of the eye in order to be considered is the irido-ciliary organ. I do not know of any pathological condition of this organ attributable to eye strain. I know that iritis has been thought to owe its presence in some obscure cases to eye strain, but this has been on account of inability to trace it to any other source. It is no doubt an exciting factor, but not a cause. We have a functional trouble, namely, spasm of the ciliary muscle, that is due to excessive accommodation, but I know of no other abnormal conditions caused by refractive errors.

There is only one pathological condition of the lens to be considered, namely, cataract. It has been proven beyond doubt that the proper correction of refractive errors will retard the progress of cataract, and some reliable authorities claim to have caused the opacity to retrograde and improvement in vision to occur; such facts being proven, we can safely include refractive errors among the causes of cataract.

The structures constituting the fundus of the eye are so closely associated that they may be considered under one heading, or as a group, for all practical purposes, when considering the effect of refractive errors. The one great error of refraction that produces pathological changes in the fundus is myopia. Progressive myopia, if unchecked by proper correction and treatment, will produce choroidal changes, retinal changes, as well as changes in the vitreous. As to the question of whether progressive myopia is originally an error of refraction or a disease *sui generis,* I am not here to discuss, but, with the disease once established, our only effective weapon to fight it is to keep pace with its progress. If it is not checked, we may expect a fluid vitreous, photopsia from irregular or detached retina, choroidal disturbance, and posterior staphyloma. Other errors of refraction do not produce such pronounced troubles. The only abnormal condition of the fundus, functional rather than pathological, is amblyopia exanopsia; this may accompany any error that produces squint.

There remains one trouble that is not limited to any special structure of the eye, namely, glaucoma, to which we should give some consideration before closing. The theories of the cause of glaucoma are numerous, and the subject of refractive error has not been neglected. The vast majority of eyes that are afflicted with glaucoma are micropthalmic or hypermetropic; how much of the danger of glaucoma is averted by the proper correction of this hyperopia is difficult to estimate, but I think you will all agree with me that it is a dangerous factor to neglect. Glaucoma once developed is not cured by the correction of a refractive error, but probably more cases than we are aware of have been averted in the more recent times by properly-adjusted lenses. It would be interesting to have exact statistics of this as well as of other conditions of the eye for several decades past, in order to find by comparison what influence the scientific measures and exact methods introduced in the last decade for the estimation of refractive errors have caused in the amelioration of eye diseases.

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THE ANNUAL MEETING OF THE STATE MEDICAL SOCIETY.

The annual meeting of the Medical Society of the State of California, which was held in San Francisco on the fifteenth, sixteenth, and seventeenth of April, was the most successful in the history of the society. The attendance was exceptionally large, the roll snowing an excellent representation from all parts of the state. The program presented a large number and variety of papers, that well filled out the work of each section. Many were of high scientific value, and all possibly above the average of other years. The discussions, while limited by the length of certain papers, were animated, and every phase of each subject was pointedly and carefully considered. Not only did the program demand the earnest consideration of the members, but several resolutions and the adoption of the new by-laws and constitution held the attention of the assembly to a marked degree. The readiness with which this report of the committee on revision was accepted shows that the medical men of the state are fully alive to any rational proposal by which a union of interests and effort may be secured to the greater advance of the medical body. The acceptance of this scheme seemingly augurs well for the welfare of the profession in California. Some of the sections of these by-laws were the subject of considerable discussion, especially that part of Article 14, Section 7, which treats of the power to appeal questions of ethics from the county to the state society. Such matters have always played havoc with the membership of the latter, and are possibly best understood and appreciated in the society and locality where the offender lives, and therefore the solution could possibly be more properly made in the county society to which the accuser and the accused belong. The wisdom of the committee, however, which had labored hard and faithfully with the problem for a year, prevailed in this and all debated points, and the proposed constitution was adopted as the law of the society by a vote on each section.

Among resolutions offered was one which urged the necessity of vaccination and the establishment of a vaccine farm. The importance of this suggestion, because of the large number of cases of smallpox that have occurred in this city and state, can not be insisted on too strongly, especially because of the existence of no law, or its non-enforcement in many counties. The appearance of irresponsibility which apparently surrounds the removal of a smallpox patient from county to county is indicative of either great indifference on the part of county health officials in fulfilling ordinary health regulations, or the law is never brought into question. The establishment of a vaccine farm on the coast would do away with much inconvenience in securing fresh vaccine, especially during the summer months, but such an enterprise could hardly come at present within the domain of this society.

The subject of plague was brought once more before this body by a letter to the secretary from Dr. Taylor, of Crawfordsville, Indiana, who, in unmeasured terms, justly censured certain physicians in this community for their absurd position, and unreservedly chastised the governor of the state and the mayor of San Francisco for the danger to the nation's health by their false statements and refusal to carry out proper quarantine measures. As a sequel, the following resolutions, which bravely support the present Board of Health, were passed with but one dissenting vote.

Whereas, The mayor of the city of San Francisco has seen fit to remove the so-called old Board of Health; and,

Whereas, The chief executive of the city has stated that he has determined, after a prolonged personal investigation, that bubonic plague has never existed in San Francisco; and,

Whereas, The position is absolutely unsupported by any competent, unprejudiced physician who has made personal examination of suspects or alleged cases of plague before or after death, or who has examined the bacteriologic evidence presented, and is further in direct conflict with the findings of the Federal Government experts and special commission; therefore, be it

Resolved, That the Medical Society of the State of California emphatically condemn this action on the part of the mayor of San Francisco, and at the same time indorse the position always maintained by the old Board of Health in its sanitary defense of the people of the city of San Francisco and of the country at large.

The last paper on the program, "Medical Education," by W. F. McNutt, and the discussion which followed, was the occasion of some very stringent comment on the methods pursued by a certain one of our medical schools. There has always been serious reason for doubting that the published requirements were ever lived up to; that the practical enforcement of its regulations for admission was a myth; and that the course of study was badly carried out; but it was alarming to learn that so great abuse of rights conferred by law to an educational body could be consented to by men proclaiming to educate and train their fellowmen for so serious an occupation as the care of the sick and the preservation of life. The charges preferred by some of the speakers are worthy the consideration, not only of the profession, but the Association of American Medical Colleges.

As has been the case at all meetings, politics played a certain part in the proceedings. This element, though out in full force and faithful to its various interests, did not parade itself so boldly, as on other occasions, as to interfere with an even and pleasant completion of the order of business. A sense of goodfellowship, and a deeper interest than usual in the scientific work of the meeting, was apparent on all sides. There seemed to be greater harmony, and many expressions of pleasure at the large attendance and the complete success in every way of the meeting of 1902 were heard. The following officers were elected for the ensuing year:—

President, Frank B. Carpenter, San Francisco; vice-president, Dr. Charles C. Wadsworth, San Francisco; second vice-president, Dr. D. A. Hodgehead, San Francisco; secretary, Dr. George H. Evans, San Francisco; assistant secretaries, Drs. Z. T. Malaby and E. M. Bixby; treasurer, Dr. E. E. Kelly, San Francisco; board of trustees, Drs. C. W. Nutting, Etna Mills; Thomas Ross, Sacramento; F. L. Adams, Oakland; W. H. Jones, St. Helena; A. W. Morton, San Francisco; George A. Hare, Fresno; George L. Cole, Los Angeles; W. S. Fowler, Bakersfield; C. G. Kenyon, San Francisco; J. Rosenstirn, San Francisco; Wiliam Le Moyne Wills, Los Angeles; board of medical examiners, Drs. Dudley Tait and W. S. Thorne, San Francisco; David Powell, Marysville; D. E. Osborne, St. Helena; R. L. Wilbur, Palo Alto; alternates, Drs. J. M. Kirk and Clark Burnham, San Francisco; and S. H. Buteau, Oakland; delegate to American Medical Society, Dr. H. Bert

Ellis, Los Angeles; alternate, Dr. H. M. Sherman, San Francisco.

THE PUBLIC HEALTH ASSOCIATION OF CALIFORNIA.

The recent formation of an association bearing the above title should be glad news to the health officers of the various counties and to the profession of the state. The turbulent course undergone by our public health matters during the last year shows that reliance can no longer be placed in the State Board of Health as at present constituted, or in any board that can be controlled by political or financial interests, especially when health officers forego their oath of office and that of their profession with an effrontery that taxes the ingenuity of man for a plausible or even pardonable excuse. With a hope that this new association will stand clear of politics, and spend its energy for the honor of medicine and the health of the nation, the most earnest expression of good will is herewith extended. This association is a necessity; its field of labor and usefulness is wide, far beyond the realization of its promoters; and no state in the Union is more in need of an honest administration of its public health officers than is California, not only for the purpose of preventing disease, but the equally-important task of enforcing the laws and regulations governing and protecting its towns and counties. A glance into existing conditions and the proper administration of its obligations will demonstrate to the members of this body that their work is unlimited, and if boldly and conscientiously done, will bring more honor to them and more gratitude from the profession than can be attained by any medical association on our western slope.

PLAGUE, 54TH CASE.

United States Marine Hospital,
Plague Laboratory,
641 Merchant Street, April 20.

To the President of the San Francisco Board of Health—

I have the honor to report that the provisional diagnosis of this laboratory in the case of Chin Suey Kim, autopsied to-day, is bubonic plague. The following history has been obtained by me: Age 30 years; late resident of Davisville, California, from which city he arrived in San Francisco on the evening of April 17, and took quarters at the undertaking establishment of Man Fook, 838 Clay Street, where he died at five o'clock to-day. This adds another case to the already sufficient evidence that San Francisco stands in constant danger of reinfection from other sections of the state. It has now been fifty-seven days since the last recorded case of plague, which arrived here from Berkeley, Cal. This man was sick in San Francisco for about sixty hours, during which time other places than that of his death may have been infected. The death certificate in this case gave the previous residence as Winters, which is about ten miles west of Davisville, but I am satisfied that he came from the latter place.

Respectfully,
M. J. White,
Asst. Surgeon Marine Hospital.

CORRESPONDENCE.

THE STATE SOCIETY MEETING.

I would thank you for a reasonable amount of space in your journal to say a few things regarding the late meeting of the Medical Society of the State of California.

Upon the whole the meeting was a pleasant one; a kindly spirit was manifest, and the atmosphere of the occasion was encouraging and helpful. I believe this is significant that candor and cordial fellowship will prevail as a rule and not as an exception. The papers and reports in the main were very good, and in some instances the discussions, but this important feature of scientific work has not reached high-water mark. It is believed that they will be better under the sectionized meetings of the society.

The retiring officers and committees deserve warm commendation for the work they so well performed.

The most important transaction of the meeting was the adoption of the new constitution and by-laws. It is a pleasure to know that this was done with harmony and satisfaction. I was the author of the resolution which was submitted last year at the meeting in Sacramento, by Dr. Rooney and myself, for the appointment of a Revisional Committee of fifteen. It is fortunate that this resolution was then adopted. I was a member of this committee, and we labored with the most gratifying harmony arduously and carefully to draft a law that would be equal if not superior to that of any state society. I believe the committee did this, and if the new law is firmly, persistently, yet kindly enforced, it will result in the advancement and elevation of the medical profession and the uplifting of mankind.

As I had given the matter of organization, reorganization, and laws governing county and state societies much study during the year just past, I would have been pleased to have been the first president under the new order of things. While I was not confident of success in the contest for the office of president, the highest honor our state society can bestow, nevertheless, it was an opportunity to test my *persona grata* in a society of which I had so long (29 years) endeavored to be a useful and consistent member, and a non-contentious one, so far as my personal interest and advancement were concerned. Had my interests been *more* personal, I think it will be conceded that I would have been president of the society ten or more years ago. Although not elected, I was pleased that I received a vote that was not only more than complimentary, but was given almost spontaneously. With but few exceptions my associates of many years' standing supported me. This expression of confidence is exceedingly gratifying. An urgent engagement awaiting me, and my hurry to fulfil it, deprived me of an opportunity at the proper time to publicly express my thanks to those who cheerfully voted for me. To them I now tender my cordial thanks and attest my profound appreciation for such an evidence of esteem.

I earnestly hope that, under the new regime and new officers, the first year's trial will prove far more encouraging and satisfactory than our most sanguine expectations, and that all the interests of the society will be greatly advanced. In conclusion, I invoke upon the future work and deliberations of our State Medical Society the spirit of liberty, the spirit of courage, the spirit of truth, and, above all, the spirit of peace. Very respectfully,

George William Davis.

406 Sutter Street.

SOCIETY PROCEEDINGS

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, March 11, 1902.

The president, Dr. J. C. Spencer, in the chair.

TUBERCULOUS LIPOMA.

Dr. C. G. Levison read a paper, "Lipoma Arborescens Tuberculosum of the Knee-joint, Necessitating Total Extirpation of the Post-Patella Bursa."

Dr. H. M. Sherman: I was much interested in Dr. Levison's paper, but would like to ask why he concluded it was tuberculous.

Dr. Levison: It was felt that the process was tuberculous on account of the intense round-cell infiltration present. But there was no caseation, nor was there any sign of a giant cell. I should like to hear what Dr. Nelson has to say upon this subject, as she has made a partial examination of the specimen.

BONE FILLING.

Dr. J. Rosenstirn read a paper, "A Report on Bone Filling."

Dr. Sherman read a paper, "A Preliminary Report of a Little Bone Filling."

Dr. Hunkin: This method of bone filling is particularly interesting to me, because of late I have been watching and trying to help nature fill up such cavities in a natural manner. A few weeks ago I showed five cases at the Academy, in which cavities in bone had filled up in remarkably short periods. The question then arose that the plan might work in small tuberculous cavities, but could hardly be expected to in large cavities from bone necrosis. I here present an X-ray picture taken within a week of a tibia in a girl about 14 years of age, in which the whole shaft from articular cartilage to articular cartilage was removed, leaving nothing but a very thin, almost paper-like involucrum. The picture taken three months after operation shows solid bone all along the line of much greater width than the fibula by its side, and the bone has already almost stability enough to walk on. This was about as big a cavity as can occur; it is progressing satisfactorily. In small cavities I have had very quick results, some healing in from three to twelve dressings. There does not appear to be any necessity of putting inorganic material into bone cavities, but only that the cavity be made and then kept aseptic, and healing goes on all right. If there is no infection in bone, as in other structures, healing is rapid.

Dr. T. W. Huntington: The boy that we saw this evening is a good example of bone filling. I do not know if the plaster of Paris was absorbed or will be absorbed, but he is certainly in remarkably good condition. I was more than skeptical at the time I saw the operation done by Dr. Rosenstirn, but shall be willing in the future to adopt a similar course.

Dr. H. Kugeler: I believe that the use of metallic or non-absorbable substances for bone filling has been found unsatisfactory and been pretty generally abandoned. If, as Dr. Rosenstirn claims, the plaster of Paris is absorbed, it certainly is an excellent method of treating these cases. The suggestion referred to by Dr. Sherman of using agar with an antiseptic should be an ideal method. The difficulty with the blood clot has been that it is an excellent culture medium, and when enclosed in a cavity forms an ideal spot for bacteria to thrive; at the same time, the possibility of making a bone cavity in cases of this kind of aseptic is rather remote. Nature will undoubtedly do a great deal toward the repair of bone defects. There was a woman at the St. Joseph Hospital in whom the humerus from the shoulder to within four centimeters of the elbow was removed subperiosteally. She was a pale, sickly woman before the operation; to-day she is stout and rosy cheeked, and uses her arm freely, can even lift a large milk can with it. The entire length of the humerus has been replaced.

OSTEO SARCOMA.

Dr. Huntington read a paper, "Some Clinical Aspects of Osteo-Sarcoma." (See page 133.)

Dr. Kugeler: I have seen a number of cases of osteo-sarcoma, mainly of the extremities. One point made by Dr. Huntington should be emphasized, that in sarcoma of the femur the treatment should be disarticulation of the hip-joint. In most text-books it is taught that in sarcoma of the lower end of the femur amputation through the upper third may be done. The sooner we discard that idea, the better will be our statistics. I have a young man of 29 under my care now who came to me in November, 1900, with a sarcoma of the lower end of the left femur. Misled by the usual advice, I amputated three inches below the trochanter. In two months there was a recurrence, and I disarticulated at the hip. That was three months ago, and I fear that there is a recurrence again at the present time. Another case was a young man of 17, with sarcoma of the head of the tibia. An amputation was made through the middle of the thigh, and at the present time, about one year since the operation, there is still freedom from recurrence. As to the occurrence of metastatic growths, the involvement of the adjacent lymph nodes is much rarer and later than in carcinoma; metastases take place through the blood channels. I have used the Coley fluid a number of times, and the only benefit I have seen from it has been that it hastens the exitus lethalis in these unfortunate sufferers. Osteo-sarcomas, and more so the small, round-celled sarcomas, are very malignant, and when Coley's results were announced, they were hailed with joy; but other men have not had as satisfactory results. The suggestion made of employing the Coley fluid as a post-operative preventive of recurrence is one worth trial, though promising little.

Dr. Sherman: Dr. Huntington's paper brings out many important points. How are we to be governed in deciding how much should be done in doubtful cases? We constantly see cases of vague pains in the joints, which do not yield to potassium iodid, and could not be due to tuberculosis, and possibly may be due to a neoplasm, and we can not at the beginning make that diagnosis, and that is the time when the operation could be of most benefit. In my experience have done five hip-joint amputations for sarcoma of the leg. In one case the patient had had sarcoma for ten years. He had had one operation, from which he got no benefit. His condition went from bad to worse as the tumor developed, and, when I saw him, he had sarcoma of the femur, acetabulum, and ileum. In that case the man's earliest symptom was pain in the hip, and no one could have foreseen the ultimate development. In another case the sarcoma was at the lower end of the femur, and I performed a hip-joint amputation, but the prolongation of life was but little. In another case the sarcoma existed for eight years in the muscles of the thigh, and I had wanted to get it out four years before I did finally operate. All of these people died in a comparatively short time, one in two hours, two in from one to four months, and the other one year, which is the limit Wyeth gives. The first is still living; the time is between nine and ten years. She was the first I did by Wyeth's method, is still living, and is the oldest case after operation, with no suspicion of recurrence at present record.

Dr. S. J. Hunkin: I have seen about twelve cases of sarcoma; they are all dead, regardless of how radical an operation was made. I have seen several times amputation through the hip-joint for sarcoma around the knee and in the thigh; once amputation at the knee for a small tumor as big as a goose egg just in front of the tendo Achillis, yet the sarcoma recurred in the lung. Most of these cases have died later from lung sarcoma. My experience has been that, no matter how radical the operation, sarcoma will recur almost surely.

Dr. T. W. Huntington: In regard to Wyeth's method of infecting wounds, one or two were infected with erysipelas, in the other cases with infected gauze, with the idea of getting suppuration. In one case there was extensive suppuration, and a button of bone came away, followed by a good recovery. The idea in the operation is to go above the bone involved; that is about as far as our present knowledge dictates. I want to say a word in closing in regard to the extensive operations which are done for lympho-sarcoma of the neck. Surgical interference in these cases, as well as in extensive involvement of the superior maxilla, are in the main futile.

Regular Meeting April 8, 1902.

The president, Dr. J. C. Spencer, in the chair.

SMALLPOX.

Dr. J. G. Morrisey read a paper, "Some Phases of the Present Epidemic of Smallpox in San Francisco; Its Character and the Official Control of It." (To be published.)

Dr. W. S. Hereford read a paper, "The Variations of Smallpox in the Different Epidemics; Notes and Difficulties of Diagnosis; Prophylaxis; Method of Vaccination, etc."

Dr. Henry Gibbons, Jr.: I am especially interested in the subject of vaccination, because I think it is often not properly done, and, in fact, because I feel it is overdone in many cases. I recollect the experience of Marston in S. P. H. of London, over a period of thirty years, which was that four points of vaccination upon the arm protected more than three, and three more than two, and two more than one; the greater the number of points of vaccination, the greater protection; not vaccination repeated from time to time, but done all at one time. It is the custom in some countries to vaccinate at four points on the arm; in our country the tendency is to vaccinate at two, and sometimes one only "takes." The impression seems to exist in the minds of some who vaccinate that the more demonstration made, the greater the protection, whereas, the least surgical interference done to the arm is the best. The original method of Jenner was to put a little of the virus from the eight-day vesicle on the point of the lancet and stab the arm slightly, thus planting the virus under the skin. The object is not to draw blood. The typical vaccine vesicle is circular, and has several compartments divided by septa. I find a great many cases in which extensive surgical wounds are made, covering an area of a dime or a nickel, with blood streaming down the arm. This is not only unnecessary, but gives an opportunity for the introduction of septic germs. I saw a case once which was a puzzle to me for a brief period. A child had been vaccinated over a very large area, which resulted in so much inflammation that a poultice was applied. This macerated the skin and permitted the virus from the half-formed vaccine vesicles to vaccinate the skin for an area as large as a silver dollar. Over a hundred vaccine vesicles were crowded into this area. I believe that extensive excoriation of the skin gives no more protection than the more moderate application of the virus. I agree with the conclusions of the paper regarding the efficiency of vaccination, and I do not understand how any one reading the literature of the subject can have an atom of doubt as to its protective influence. The fact that smallpox has almost entirely disappeared from the Germany army is a good illustration of its value.

Dr. D. W. Montgomery: The difficulties in making an early diagnosis of smallpox are often very great. For instance, you find a patient with a clear history of having had measles, and with an unusually prominent, thinly-scattered rash of measles on the face. Such a rash may strongly resemble the rash in an early stage of smallpox. The difficulties of diagnosis in this epidemic were particularly marked, because of the mildness of the disease. Some of the cases, which were at first quite open to question, later on turned out to be undoubted smallpox. The pustular stage of smallpox presents its own difficulties in diagnosis. For instance, the drop of the temperature to normal may deceive one into thinking that the affection is not a fever at all, for one does not necessarily get a history either of backache or of fever. One is then confronted by a pustular, apparently nonfebrile disease, which may readily be taken to be syphilis. When Dr. Keeney was health officer of this city, he asked me to see such a case, which I at first thought was syphilis, until the secondary fever arose and a typical smallpox eruption appeared on the soft palate.

Dr. E. F. Frisbie: I was called to attend an interesting case last month. The man was suffering with intense backache, and he thought he had la grippe. I agreed with him. He had pains in the back and limbs and headache, and no eruption. I found albumin in the urine, and it was very acid, and I gave him a prescription for an alkaline mixture, and in twenty-four hours the backache disappeared and the fever dropped. His wife had put a large plaster on the back, and that was removed this morning, and on the surface were numerous papules. It looked like the eruption of a thapsia plaster, and I believed the eruption was caused by the plaster. The man was comfortable next day, and the third day had a normal temperature, and I was almost of the opinion that it was not necessary to see him again, except for the albumin in the urine and a scanty secretion of urine. The next day there was some eruption further up the back, about one-half dozen papules. The fifth day there was some eruption on the head and a few on the face, and I began to be suspicious, as the eruptions became vesicular. The next day more papules occurred, and I concluded to ask Dr. Montgomery to see him. By the time we arrived, he had many eruptions; we could form no other conclusion than that he had smallpox. He told me he had been vaccinated a number of times in his youth, but it never took. He went through a mild course, with no secondary fever. He was well in two weeks from the time I saw him. The peculiar feature was that the eruption appeared first on the back under the plaster, and for three days I was under the impression that it was an eruption due to counter irritation from the plaster, as sometimes occurs. As the pricking of the vesicles emptied them through one opening, I was of the opinion that it was varicella at first.

Dr. Patterson: I have listened with a deal of interest to the papers and discussions. When I received notice from the secretary of the society announcing a paper on the "Recent Epidemic of Smallpox in San Francisco," I was surprised, for the daily newspapers, which usually have a little something on everything, even to criticisms of Board of Health, said nothing about this epidemic of smallpox. But doctors do differ in their diagnoses. The first paper read reported 254 cases of smallpox in San Francisco during the year—a small "epidemic," to be sure, if we disregard the strain put upon the word—on the average about one case every other day in a population of nearly 400,000. Personally I have not seen a single case of smallpox during this time. I have seen several severe cases of chicken-pox; and it is possible, probable, I believe, that many of these severe cases of varicella are mistaken for variola. It is hardly possible for a careful observer to confound syphilis, measles, or scarlet fever in their papular stages with varicella or variola. Every physician who keeps his wits well about him will give himself sufficient arc of time for observation to confirm or disprove his judgment formed from first presentations. And he should always do this before hazarding an unwarranted diagnosis. Take an example: I was phoned to go to Oakland to see a case over a year ago. When I arrived, I found a young woman about 16 or 17 years old, the daughter of a professor in the university at Berekeley, with a thick vesicular rash, generally distributed over her face, chest, abdomen, arms, and legs. The spots were small, contained a clear fluid, and were distinctly umbilicated. The history I got at the time from the young woman's mother was that for three or four days previously there had been nausea and vomiting, headache and backache, and a high fever. The rash appeared two or three days before my visit. The tongue was coated, stomach irritable, and the temperature about 100° Fahr. I was in doubt, this being a sporadic case in that neighborhood, Twentieth Street and Telegraph Avenue, Oakland, whether I had a case of chicken-pox or smallpox. None of the other exanthemata could be considered. I could not determine whether a doubtful scar on the arm was from a successful vaccination or not, and I could not get a reliable history of it. There were none of the characteristic pits on this scar. I told the young woman's mother that I was in doubt as to this case, but that the patient must be isolated, and that I would see her daily for a time before giving a positive opinion. You will all remember that even so great a man as Hebra, of Vienna, no mean diagnostician, by the way, held to the identity of varicella and variola. I watched this case very closely for several days. The vesicles passed into pustules, thence into crusts, many being confluent. About the fourth day of my visit a crop of papules appeared in the intervals between the spots. These ran into small vesicles, then dried up and faded away. The temperature never ran above 100° Fahr. Was this a case of varicella, varioloid, or variola? At the time I took it for chicken-pox, and so declared myself to the parents. I knew there was no mistake in the diagnosis, because subsequently in that same neighborhood several cases of unmistakable chicken-pox in children developed, some of them severe and some quite mild. The young woman has now one pit over the eyebrow near the exit of the supraorbital artery, two or three on the chin, and several over the body. I had never before seen such a severe case of varicella, and I believe ninety-nine physicians out of a hundred would at the time of my first visit have called this case smallpox, quarantined the house, or sent the patient to the pest-house. I think mistakes are often made in these diseases, and that the very elect may often be deceived; still, perhaps, in doubtful cases it is best to err on the side of public safety. There is no other disease that ought to be confounded with varicella or variola, if sufficient time be allowed to correct deductions from the doubtful phenomena. We ought to depend upon the clinical history of each case, and not upon any vague notion as to the nature of the poison, which has not as yet been definitely determined. There are some things peculiar to these two infectious diseases, the chief of which is the special predilection of their poisons for the rete mucosum. Section of the skin made during the passage from papule to vesicle has shown cloudy swelling, disorganization, granular appearance of the cells of the rete, with a raised area extending around. When the vesicles run together, we have confluence, which in variola usually extends deep into the corium, followed by sloughing; in varicella the destruction is ordinarily quite superficial, though in severe cases the corium may be deeply invaded, and in many places. These are the chief differential features of these two diseases, so far as the pathological changes in the skin are concerned. This predilection of the poison for the rete mucosum in dark-skinned persons in the colored races, Mongolian and negro, has doubtless some relation to the greater severity of variola in those persons and races, and also to the higher mortality among them.

Dr. W. F. Cheney: The important point about the matter is the diagnosis. I saw a case about two months ago that it was impossible at first to diagnose. A young woman 30 years of age came to my office complaining of pains about her abdomen, in her head, back, and limbs, and with a temperature of 102. She was constipated and had a badly-coated tongue. Thinking the case one of auto-intoxication, I gave her a prescription for a purgative, and sent her home. The next evening I was called to her home, and found her headache was more violent; she was dizzy, and, on attempting to rise and dress herself, had fallen in a faint; the temperature at this visit was 103°. Thinking the case possibly one of typhoid, I examined the body for rose spots, but there was absolutely no eruption of any kind. I saw her again early the next morning, when she told me she was perfectly well, her headache, dizziness, and pains having disappeared. The temperature was then only 98°. This sudden drop of five degrees during twelve hours made me suspicious. On examining her again, I found numerous papules over her face, head, and feet, all of which papules were hard, deep-seated, red, and all about equal in development. I at once notified the Health Board that I considered the case one of smallpox. Dr. Morrissey was sent to examine her, confirmed the diagnosis, and sent her to the pest-house. My greatest gratification in this case was that this woman was one of those cranks who had never been vaccinated, because she did not believe in vaccination. Regarding the question of vaccination, no child should be given a certificate until the physician is certain that the vaccination has been successful. How shall we determine this point? It seems that we must rely upon the classical course of the lesion so long described in the text-books. The glycerinated lymph does not seem to me to produce this typical course, and I do not believe it as efficacious as the points. It may protect against smallpox, but an epidemic would be required to prove it. Since last August we have been vaccinating the school-children for the city in the Children's Clinic at Cooper Medical College, and have found the Alexander points the most successful of all.

Dr. T. B. DeWitt: It seems to me, in arriving at a correct diagnosis, one point was omitted, that is, in the absence of successful vaccination, we have a more infectious disease in varioloid than varicella. If we have a case of varicella in a family, it will stop. In varioloid, if there is a case in the family without successful vaccination, it will attack the entire family; and I believe this difference is one of the things that will help us to arrive at a correct diagnosis. I have come in contact with thirty or forty cases, and I depend mostly on that to confirm my diagnosis.

Dr. M. Strunsky: In the light of our present clinical knowledge, it seems at times impossible to distinguish a bad case of chicken-pox from a mild case of smallpox. I remember a case I had about a year ago, that of a young man who gave a history of fever, backache, and headache. The face and body were covered with vesicles and pustules. Specific history was denied, and I thought it was a bad case of chicken-pox, yet it looked suspicious. I reported to the Board of Health, and Dr. Morrisey telephoned to me that he told the people it was a case of chicken-pox. Judging from Dr. Patterson's statement of his case, it was identical with mine. There was nothing to substantiate the conclusion that the case was some other than that of chicken-pox. It may have been smallpox. Most of our authorities claim that our present knowledge of differential diagnosis of these two diseases is insufficient for differentiation in all cases one for the other. Some go even as far as to hold that chicken-pox is nothing else than a mild case of smallpox.

Dr. Hereford: My idea was to give a typical case for the purpose of study. The present epidemic was far from my paper. The glycerinated virus is all right in private practice, and then we put on the shield, etc., but all this takes time, and we have to size the patient up, comparatively speaking, to know whether we get fifty cents or ten dollars for the operation. The operation is a really very important matter, and we should be scrupulously clean; I believe like the old lady, if the skin and clothes are clean, it is all right. It is not necessary to have a "sore arm" from vaccination. When it "takes," it should not be necessary to go to bed with it infected and a terribly inflamed arm. That is the reason I mentioned proper and successful vaccination. "You can vaccinate properly, but it may not be successful, and we may vaccinate properly and yet get an infected arm. If you use antiseptics too freely in preparing the arm, or immediately after vaccinating in the dressing, you are liable to get good results; it may kill the virus; also if you use the closed shield." Should it remain in place any length of time, you may have a very offensive condition. I think it is proper to use a shield. There are many varieties of shields, but all should have ventilation and not be closed. I have vaccinated a number of people, and prefer the old-style ivory points. The virus dries on the wound and is absorbed, and then a temporary dressing, not to be kept on, may be applied; later a little antiseptic cotton or other antiseptic dressing may be applied if necessary.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, March 25, 1902.

SUTURE OF MUSCULO-SPIRAL NERVE.

Dr. Emmet Rixford exhibited a case showing the ultimate result of suture of the musculo-spiral nerve two years after operation. The nerve had been severed some two months before the operation. The case was in a girl 13 years old, who, while playing about a drawbridge, was caught in the timbers as the draw opened, and both arms broken midway between shoulder and elbow, and the right axilla torn open, exposing the vessels. There were, of course, many other severe bruises about the body, which made the proper application of splints to the fractures practically impossible. After the flesh wounds had healed, both fractures were exposed and wired, the left in four weeks and the right in eight weeks after the injury. The drop wrist was not noted at first, but was very evident on examination before the operation, as well as complete radial paralysis and atrophy. On cutting down, the proximal end was found in place, but greatly enlarged, forming a neuroma about 5 mm. in diameter. The distal end was found only with difficulty by exposing its lower portion in front of the elbow-joint and following it up, and was finally located in front and to the inner side of the humerus, i. e., precisely on the opposite side of the bone to its normal position. When the neuroma was cut off and the distal end freshened, the ends would not come together within 3 cm., and it was debated whether to split the nerve and do a plastic operation to bring the ends together, or to graft in a portion of some neighboring nerve, such as the external cutaneous, or to do what we finally did, on the suggestion of Dr. W. C. Riley, who was present, and shorten the humerus that much. The large amount of callus present was cut away, and the ends of the bone mortised and wired, and the nerve ends brought together and united by two or three sutures of catgut. Primary union took place, and in due time the fractures healed, but the nerve showed no sign of repair for a long time. The scars are hypertrophic, although primary union was secured. The patient went from one clinic to another, and gradually sensation and motion began to return. Electricity was used by one clinician. At the present time, two years after the injury, the function is practically perfect. The patient works in a can factory and has no difficulty in doing her work. There is still a little atrophy of the muscles of the forearm.

Dr. Huntington: This case is of peculiar interest to me, as I recently dealt with a divided median nerve in the forearm of long standing, six to nine months. The ends separated for 1.5 inches, with a large neuroma at the distal end of upper portion. There was no difficulty in reuniting the severed ends. I shall keep watch of him, as these cases are rare, and it will be interesting to know the result. Another recent case shows the amount of nerve injury that might be attended with marked interference with function in the distal nerve. This was a case of stab wound of the arm just above the median nerve and over the brachial artery. The artery was divided and a large traumatic aneurism was formed. There was anesthesia over the dorsal surface of the thumb, the outer surface of the index finger, and the approximating sides of the index, middle, and ring fingers; otherwise the function of the nerve was intact.

Dr. H. M. Sherman: I am pleased to hear of the return of function. Some little while ago I sutured the humerus and musculospiral nerve. The nerve has given no response up to the last time I saw the man, and there was degeneration of the muscle. How much restoration I have to expect I do not know, but I give a good long time, as the nerve beyond has to be regenerated, and that takes some time, six months at least. If it does not unite, he may come back, but perhaps by and by he may get some function. Laplace reported return of function in two days after suturing of the nerve, but that, of course, is hard to believe.

Dr. J. H. Barbat: In a case of fibroma of the sciatic nerve, in which pain necessitated excision, I found that there were about four inches of space between the cut ends of nerve which had to be bridged over. I made two flaps, one from the upper and one from the lower end, by cutting half way through the nerves three inches from the end and turning down the flaps, which were sutured with chromicized catgut. Within six weeks there was some restoration of sensation, but not the slightest sign of restoration of motion. The patient died four months after, and I was not able to follow the case further.

Dr. Hunkin: I remember a leper in the pest-house in whom a piece of the ulnar nerve, to the best of my recollection, was exsected by Shields; the patient had restoration in about six months; that period was kind of fixed in my mind as about the proper time for restoration.

Dr. Sherman: I would like to ask if any one knows of definite restoration of function when the procedure mentioned by Dr. Barbat has been followed experimentally or clinically. The thing has never attracted me at all. I understand how it is in tendons, but in nerve I could not understand.

Dr. Barbat: I assisted Dr. Carpenter in a case in which the flexor tendon of the middle finger was cut. In making the incision, a large branch of the median nerve was cut, which, after the tendon was repaired, was accurately brought together with catgut, and the hand kept immovable for two weeks. The restoration of both tendon and nerve was perfect, and there was no area of anesthesia apparent four weeks after the operation.

Dr. Rixford: There is nothing I can add, but I might mention another case in which I sutured a nerve, the ulnar at the wrist, sutured eight months after being cut. The neuroma was cut away from the proximal end and the distal end freshened and the nerve sutured with catgut and the hand put up in complete flexion in plaster of Paris. I followed the case for three years, and there was gradual return of function. It was a matter of a year or more before there was much improvement in sensation, and it was a long time before the thenar and hypothenar muscles filled up the hollows in the hand. The hand is not normal, and never will be, because of partial ankylosis of several of the phalangeal joints. The patient was past 50, and more or less gouty, had had the hand fixed for a long time before the operation, and afterwards could not stand the pain of passive motion.

EXCISION OF THE ANKLE-JOINT, KOCHER'S METHOD.

Dr. Rixford presented a case showing the ultimate result of excision of the ankle-joint by Kocher's method for tuberculosis of the synovial membrane and the astragalus. The patient was about 30 years of age. There was gradually-increasing soreness in the joint, lasting for nearly a year, without any very definite history of severe traumatism. Various methods of treatment had been tried, but without avail, until it was evident from the muscular spasm, the thickening of the synovial membrane, and the limitation of motion and the pain on joint pressure, that the joint was tubercular. Fixation in plaster of Paris gave great relief, and was maintained for about six months. Then arthrectomy was determined upon, since the patient was an adult and there was no prospect of the non-operative treatment being permanently successful, although under it the inflammation had greatly subsided. Accordingly the joint was opened by Kocher's incision, in December, 1900. This incision gives excellent access to all parts of the joint without cutting any important structures beyond the ligaments of the joint. The incision extends from the middle line in front to the middle line behind at the level of the tip of the outer malleolus. The perineal tendons are drawn backward (rarely do they require cutting, and then may be reunited by suture), the extensor tendons drawn forwards, and the joint opened completely, the inner side of the foot being folded upon the leg. A tubercular focus of some size was dug out of the astragalus; it contained a little pus; and the whole synovial membrane was dissected out, and foci in the tibio-fibular joint were also removed. There was considerable erosion of the articular cartilages, and in spots cicatrices were present, evidently the result of the healing induced by the fixation. The whole joint cavity was wiped out thoroughly with 5 per cent carbolic acid, and the ligaments united with chromicized catgut. The tendons were restored to position, and the sheaths repaired where cut, and the skin closed. There was just one stitch hole abscess, but no infection of the deeper structures. The foot was kept in plaster of Paris two months, after which time patient began to use it a little, but did not discard his crutches for four months more. Since then the joint has been slowly but continuously improving. There is very little if any motion between the astragalus and the tibia, most of the apparent motion at the ankle being in the medio-tarsal joint. Patient is able to do his business, which requires a good deal of walking, and has no particular inconvenience from a 30-mile bicycle ride. The only complaint at the present time is that he can not run, and that, after sitting for awhile, the first step or two is painful. This latter trouble is probably to be accounted for by the interference with the venous return brought about by the enforced non-use of the muscles of the calf.

Dr. Hunkin: I think there is an ankylosis in this ankle-joint, and no movement whatever. He has a foot similar to what we get after an operation on that joint, after which the motion takes place in Chopart's joint, and we get no elasticity in the gait. I should like to be sure he had tuberculosis there. The scar is so nice that the question of tuberculosis would to me be a little open, but I did not see it.

Dr. Sherman: I do not agree about the ankylosis. There is partial motion, from the fact that there is crepitus, which we never get in ankylosis. At the time I did not agree that the doctor was using the carbolic acid strong enough, but I was wrong; he has proven that. The case is somewhat comparable to cases of arthrodesis in poliomyelitic paralyses, in which an ankylosis of the ankle-joint is produced. In those cases, as here, we have here the fact that the foot has no spring in it, and have evidence that it is weak, and the patient can not put all the strain on it that he could on a healthy bone, and he does not use the foot with the ankylosed ankle as freely as he does the other foot.

Dr. Huntington: The idea that impressed me most in this connection is that we can do almost anything with the ankle-joint, with excellent results. I have had five or six cases where the entire astragalus was removed for tuberculosis and one for traumatism. The results in all cases were surprisingly good, and particularly good in the removal of the astragalus for traumatism. This case was an engineer who was thrown from the engine. There was a large tear on the inner aspect of the joint, through which the astragalus was removed with forceps. The man made an excellent recovery, and at last report was running an engine. He walks almost as well as the patient presented this evening. The compensation of the rest of the joint made up for the bone removed. In five cases in which I removed the astragalus for tuberculosis there were not as good results as in this one, but approximately so. All walk well.

Dr. Sherman: The astragalus can be easily dispensed with. Given a case of tuberculosis of the astragalus in a child, I do not think it is necessary to attempt any measure or to follow out a regular protective expectant plan of treatment, but I remove it at once. If it is seen before it goes to any other joint, we get primary union, and as good a foot as on the other side; the shoe has to have a little heel wedge in it as thick as the astragalus, and this has to be increased according as the child grows, but apart from that it requires no treatment. The child walks on the toes and heels, and runs as much as other children. As regards the removal of the astragalus for traumatism, I have only done it once. The bone was dislocated and lying between the tendon Achillis and the tibia. The bone was adhered, and it was difficult to remove it. There had been an injury of the nerve at the time of the injury or afterwards, and the man never walked well. The question, perhaps, at the time when Dr. Rixford operated was whether to remove the astragalus or not, but the question has been settled by the result. If it was in a child, I would have approved of the removal of the astragalus.

Dr. Rixford: The matter of choice of treatment in such a case is one of a good deal of importance, and is worthy of considerable discussion. The circumstances are these: An adult, a business man begrudging every hour he is kept away from his business, has extensive tubercular disease of the ankle-joint, of a somewhat chronic character, and not suppurating. In a child one would prefer treatment by fixation, as promising better final function, other things as to general health and hygiene being equal. But in the adult it is well known that fixation and protection from trauma will not cure anything like the same proportion of cases of joint tuberculosis as in children, and, when successful, that treatment requires the expenditure of a great deal of time. Two operations were open to us after exploring and finding the extent of the disease, resection of the joint and the operation of arthrectomy or erasion of the joint as carried out. The resection would have necessitated a stiff joint, but would also have opened the cancellous tissue of the bones very extensively to tubercular reinfection, while the latter operation caused a minimum of traumatism to the joint, with the possibility of retention of some movements and the exposure of a minimum of cancellous tissue to infection. I attribute a good deal of the success of the operation in this case to the prolonged rest in plaster-of-Paris splint, by which considerable healing had been permitted, as shown by the cicatricial tissue present and the hyperplasia of the joint cartilages at points of former ulceration. Dr. Huntington spoke of how tolerant the ankle-joint is of serious traumatism and what good function is retained under apparently most adverse circumstances. I might briefly relate the history of a case that came under my care a year ago, as an example of what conservative treatment will sometimes accomplish, although I must admit that I took chances, or rather the patient did, on his life. The man, weighing over 200 pounds, was thrown from a cart, and suffered a compound fracture of both malleoli, the end of the tibia being ground into the road. Some stitches were put in, and three or four days after the man was brought to me. Amputation was indicated, but the patient begged that an attempt should be made to save his foot. I said I would do my best to save it, and I nailed the two malleoli together, and took out chips of bone and bits of gravel, straws, and other things, and washed and drained the cavity. At the end of three weeks of fever and suppuration the inflammation gradually subsided, and I removed both malleoli, for they were necrotic, sawed off the ends of the tibia and fibula, and cut away most of the astragalus, making a fresh surface to receive the tibia, and simply set the bones together, putting the limb in plaster of Paris. In four weeks the man was out and about, and left the hospital in three months, and was then able to walk with a cane, the wounds entirely healed and the thickening and the soreness subsiding rapidly. I feel sure he can now use the leg. That exemplifies Dr. Huntington's remark that you can get good results from almost any injury to the astragalus. But, reverting again to the case of tuberculosis of the ankle, and the question of draining or closing such wounds as that of the arthrectomy, I would say that, in cases of quiescent tuberculosis, there is great advantage in closing completely. If the dissection is extensive, serum may accumulate, or blood, but this can be let out under aseptic precautions, without difficulty or danger. But the worst that is likely to happen is reinfection with tuberculosis, but drainage is no assurance against that. In tubercular wounds where there is already mixed infection there is little question that drainage is indicated.

SYPHILITIC NECROSIS OF FRONTAL BONE.

Dr. Sherman: I take this opportunity of showing you this man, to let you see the not unusual result of the healing process. He had two necrotic areas in the frontal bone, one on either side, about 1.5 cm. from the middle line, and a little nearer the hair line above than the eyebrows below. The necrotic bone was chiseled out, and healing by granulation followed. Every possible effort was made to lessen the size of the scar by dissecting up the skin around and drawing it in, but in spite of it we have large cicatrices and depressed ones. Now, it would be possible to dissect out the cicatricial portion and do a Thiersch graft, but the depression would not be corrected; or, as a preferable method, I could make an incision above the hair line on either side, high up enough and wide enough and long enough to permit the introduction of celluloid plates to fit the depressions in the bones. I think that could be done without any difficulty, and either before or afterwards the superficial cicatrix could be removed and replaced by Thiersch grafts. One week ago Saturday I applied one of these celluloid plates in the case of a saddle nose. I made an incision through the integument, and with a periosteum elevator lifted up and separated the skin from where the bridge of the nose should have been, and then put in the celluloid plate. The cosmetic effect did not satisfy me, and I went through the other nostril and put in a longer piece a week later. There was no suppuration, and the wound healed. The patient has a nose with a good bridge and little saddle left. As far as the celluloid is concerned, I see no reason why it should not stay. I do not know if the paraffin is so good, as paraffin is sometimes absorbed and the deformity recurs. I have heard of that, but have never tried it.

Dr. Barbat: One method of getting rid of these scars is to dissect out the scar tissue and slide the normal skin over the gap, using a celluloid plate to fill up the depression. I saw Abbe place a celluloid plate under the skin of the nose to fill a depression in the bridge, and the immediate result was all that could be desired, but I do not know what the ultimate result will be.

Dr. Tait: The Gersuny paraffin injection method would be very serviceable in Dr. Sherman's case, and I am inclined to believe it simpler than the insertion of a celluloid plate.

Dr. Rixford: I am interested in the fact that in this case the syphilitic disease did not penetrate the inner table. I have not seen many cases of syphilitic necrosis of the skull, but in the three or four I have seen, the inner table was penetrated by the disease. There is no particular reason why it should be, but it depends, I suppose, on the site of the initial focus, or on whether we see the case before penetration of the inner parts.

Dr. W. S. Thorne read a paper entitled

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Mrs. S., age 32, music teacher, married, gave a history of regular but profuse menstruation for a year or more; had missed one period, and she believed herself pregnant. The uterus was the seat of a fibroid growth, very hard and of moderate size, still fairly movable. Beneath the pubic arch, and apparently attached to the bladder wall, was a dense tumor, oblong in shape, and closely adherent to the bony brim. The broad ligament on the right side was much shortened by the extension between its folds of a dense fibroid growth. Pregnancy therefore was deemed undesirable, and I advised the medical attendant to evacuate the uterus by forced dilatation and curettement. Three months after my first visit I was again called, to find the following history: Electricity had been applied as a substitute for curetting, without effect for several weeks, and the patient was then dismissed, with the assurance that pregnancy did not exist. She subsequently fell into the hands of an irregular practitioner, who gave her massage and electricity. The final result was a miscarriage at five months. Four days subsequently the patient had a chill, followed by profuse perspiration and great depression. I found the patient the fifth day after the miscarriage profoundly septic; the daily rise of temperature 106.4, the pulse small and irregular, the chills lasting from 30 to 50 minutes. I removed by curettement some decomposing fragments of placenta, and thoroughly cleansed the uterine cavity. The treatment thereafter consisted of normal salt transfusions every sixth hour, strychnin, iron, quinia, and caffein, and later the Mamorek serum, with marked relief of temperature, respiration, and abatement of the chills for several days, when the temperature again rose to 106, with alarming concomitant symptoms. I then removed her to the Waldeck Sanatorium; determined to open the abdomen and do a hysterectomy, if practicable, even at so apparently hopeless a time. The operation undertaken at this critical juncture revealed a dense, irregular fibromyoma of the uterine body, and a number of small, subperitoneal growths, one of which was attached to the uterus by a slender pedicle; was necrotic, and was removed. An oblong tumor of stony hardness was found attached to the pubic arch and forming a part of the bladder wall. A few ounces of a turbid fluid was found in the peritoneal cavity. The condition of the patient was clearly too critical to admit of the prolonged manipulation necessary to remove the uterus; and, feeling that I had accomplished some advantage by the removal of a necrotic growth, I washed out the cavity with hot normal solution and closed the abdomen. Convalescence from this hour was slow but uneventful, and she was able to return to her home a month after the operation. A year from this time the patient's general health was perfect, her weight having increased twenty pounds, but she complained of increasing weight and pain over the left side after unusual exercise and at the menstrual periods, which were normal, save as to frequency. The uterus was slowly enlarging, and at the end of the second year I sent her to the hospital and removed the uterus and the bladder tumor herewith presented. This hard growth was firmly attached beneath the pubic arch, and formed a part of the anterior bladder wall. Its removal involved an opening in the bladder of two or three inches. The patient made a rapid recovery, and left the hospital three weeks from the date of the operation. She has rapidly gained in weight, is in perfect health, and is actively engaged in her professional work at this time.

The following is the report of the examination of the bladder tumor by Professor Ophuls, of the Cooper Medical College:—

"Calcified nodular tumor of size of large hen's egg, situated between bladder and symphysis firmly attached to wall of bladder. The tumor consists of some involutionary muscle, but mostly of dense fibrous tissue. Large areas of the tumor are necrotic and show irregular calcifications. In one place one of the calcified areas has been transformed into bone tissue. One finds typical spicula of bone with star-shaped bone cells between; then there is tissue of the construction of fatty bone marrow. Diagnosis, fibro-myoma, with calcification and ossification."

As the entoderm and mesoderm enter into formation of the bladder, nearly all varieties of tumors have been found taking origin from its walls. The benign mature connective tissue fibromata, myomata, and lipomata are very rare, and the different observers tell us that but few well-marked specimens have been recovered. I have thus far failed to find any record of a bladder tumor similar to the one here presented.

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Dr. J. F. McCone: I can but admire Dr. Thorne's brave fight against one of the severest diseases. Had the ordinary methods of treating this infection been resorted to, the patient certainly would have perished. The discovery of the sloughing fibroid as the cause of the infection and the improvement that immediately followed the removal of the cause are important and interesting points in the paper.

Dr. Thorne: Perhaps it is the imperfect explanation in my paper for Dr. Kreutzmann to think it was a mistake to bring about a miscarriage. It was not an error, and I do not think Dr. Kreutzmann would have made the inquiry if I had presented the facts clearly. The tumor occupied the anterior and side of the uterus out to the pelvic wall in the broad ligament, making the uterus and pelvic wall one on that side. For that reason the broad ligament on the left side was unexpansible, and this was, to my mind, sufficient to lead me to do as I did, and in tumors of low vitality there is danger of necrosis. Again, the subpubic tumor was prominent in the way and exceedingly dense, and the whole pelvic condition made me believe pregnancy would be dangerous; no doubt that many go on through successful gestation with large fibromata. Thirty years ago I was called a long distance in the country to a labor. The family physician was out of the country. I found a large fibroma, a hard, dense tumor, but delivered her successfully of her twelfth child. I delivered her with instruments after an immense amount of difficulty, and she went on to recovery. There was no involvement, however, of the broad ligaments, and when the tumor is posterior or occupies the summit, successful gestation is frequent. I have never seen a bladder tumor of the character presented, and the literature that I have consulted gives it great rarity. As to Dr. McCone's question, the vaginal secretion was examined and the streptococci found. She had the uterus scraped by an irregular practitioner. but I curetted her and removed some disintegrating matter. The cause of the sepsis was not the small tumor, but I satisfied my conscience that I did some good; but I do not think it was the cause of the secondary sepsis. I think the septic condition existed before the necrosis of the small tumor; it was persistent from the beginning, and I do not think the removal of the growth was the cause of the sepsis. We know that opening the abdominal cavity sometimes in tuberculous peritonitis has a wonderful effect. What I take to my credit is that I did not persist in removing the large growth, for, if I had, the patient would have died.

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LIMITATIONS OF GIANT MAGNET.

Dr. George T. Brady presented a "Case Illustrating the Limitations of the Giant Magnet." Dr. Brady wished to show the value of the Mackenzie-Davidson localizer, as perfected by Dr. L. C. Deane, and its superiority as a diagnostic agent over the pain reaction

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The president, Dr. F. B. Eaton, in the chair.

LIMITATIONS OF GIANT MAGNET.

Dr. George T. Brady presented a "Case Illustrating the Limitations of the Giant Magnet." Dr. Brady wished to show the value of the Mackenzie-Davidson localizer, as perfected by Dr. L. C. Deane, and its superiority as a diagnostic agent over the pain reaction of the Haab giant magnet. Seven months ago, while shoeing a horse, the patient's hammer missed the nail and struck the shoe, so that a splinter from the hammer struck him in the left eye. Dr. Brady saw him four hours later, when there were no inflammatory symptoms. About the middle of the inferior temporal quadrant of the cornea, two millimeters from the limbus, was a linear perforation, and about two millimeters long, and immediately behind it, a similar wound in the iris. Through the latter was seen the red fundus reflex and the margin of the uninjured lens. The fundus was normal, and the ophthalmoscope and oblique illumination failed to discover a foreign body. The eye was then several times approached to the giant magnet, with negative results. As there was no reliable X-ray apparatus available, Dr. Brady adopted palliative and antiphlogistic measures. Vision was 20-30ths plus. A few days later there was mild irido-cyclitis. The iritic congestion was depleted by instilling two drops of adrenalin chlorid, 1 to 10,000, every two hours. Vision was now 20-200ths. Having seen eyes enucleated and the foreign body found after failure of the magnet, Dr. Brady kept the case under observation, and, for his own satisfaction and the patient's security, had Dr. Deane skiagraph him with Miss. Fleischmann's apparatus, and finally located a small foreign body, probably one-quarter the size of a pinhead, just behind the ciliary region below the horizontal meridian. The vision is now 20-50ths plus, and the body being well tolerated, Dr. Brady intends to leave it in situ; and, if inflammation supervenes, make a scleral incision near the equator, and bring the tip of the magnet directly upon the spot. Dr. Brady also showed a "Specimen to Illustrate the Limited Reliance We Can Place upon the Haab Magnet Alone" as a diagnostic instrument. The eye had been injured four days before, and there was complete traumatic cataract. Vision was reduced to faulty projection, and a severe irido-cyclitis was well under way. There was a very faint metallic glimmer on the pupillary margin down and out. A small iridectomy done at this spot was rewarded by finding a particle of steel weighing one-tenth of a milligram in the excised portion. The eye had been exposed to the magnet with little or no pain. A month later the eye had to be removed, when a large particle of steel was found imbedded in the inflammatory exudate just behind the equator. In Dr. Brady's opinion it is wiser to delay interference with the magnet until a reliable skiagraph can be obtained. From experiments with pigs' eyes it has been concluded that the foreign body is drawn out by the magnet along the same path by which it entered. These eyes are invariably preserved in formalin, with resulting hardening of the lens capsule and its cortical layers, and Dr. Brady thought the reason that the foreign body in the vitreous passes around rather than through the lens is due to the preservative employed, which increases the inherent resistance of the lens.

PERFORATION OF LENS.

Dr. W. A. Martin presented a case of "Perforation of the Lens." He remarked that the case had been shown to the society two months before. The injury occurred four months ago, and, when first shown to the society, the eye was in an acute state of inflammation. A pyramidal cataract was then seen extending from the posterior capsule to the point of entrance of the pencil in the anterior capsule. Dr. Martin had then termed it a traumatic cataract, but in reality it was only a pseudo cataract. The lens fibers were certainly not involved, or there would have been a total absorption. The spaces between the capsular opacities are almost as clear as the rest of the lens. On looking closely, a line is seen running through the lens from one capsule to the other.

INFILTRATION OF CORNEA.

Dr. Martin also presented a case of "Infiltration of the Cornea." The patient, a man, had come to the clinic four weeks ago, with a history of having had chickenpox several weeks before, and two weeks before he applied for treatment he had had some disturbance of vision, with much pain and photophobia. Dr. Martin thought at first that he had a corneal ulcer to deal with, and had intended to use the cautery on it. The condition has not changed in four weeks. There are now large blood-vessels running up to the infiltration at its lower margin. The only complaint now is sensitiveness to light.

Dr. Fredrick had had a case similar to Dr. Martin's, but much more extensive. It was that of a girl about four or four and a half years old, who came with an enormous ulcer occupying the lower half of the left cornea. There was intense photophobia, lachrymation, and thickening of the lid. Dr. Fredrick did the Sæmisch operation, making an incision across almost the whole cornea, and when the lips were agape was able to remove with iris forceps a large mass of coagulated fibrin and pus from between the layers of the cornea. The wound healed kindly, and to-day the eye is well, with the exception of a large opacity, and it is now six or seven weeks since the operation was done. The fact which Dr. Fredrick desired to lay especial stress upon was that there was no entanglement of the iris, and believed that the reason why the Sæmisch operation has fallen somewhat into disrepute is because it was found to often lead to entanglement of the iris. In this case the contents of the pus cavity could be lifted out from between the layers of the cornea. Dr. Fredrick's reason for doing the operation was because he feared the surface would break very soon, and the eye be lost altogether. There was no hypopion, or, if there was, it could not be seen, because the infiltration was so dense and occupied the whole lower half of the cornea.

Dr. Cohn thought Dr. Martin's case a very puzzling and interesting one. What Dr. Fredrick had just described was a corneal abscess, a purulent infiltration of the corneal parenchyma. Dr. Cohn quite agreed with him that in that case the Sæmisch operation is often indicated. Recently he had operated on a case similar to Dr. Fredrick's, and with equally good result. He thought Dr. Martin's case a very different one, but was not prepared to state what it is. At all events, it is a superficial infiltration, and not a deep-seated suppuration, and the Sæmisch operation, therefore, was out of the question.

Dr. Fredrick thought Dr. Martin's case too dense to be a collection of pus or an infiltration. It seems purely fibrinous matter.

Dr. Martin said that he had been about to say just what Dr. Cohn had stated, in reply to Dr. Fredrick. He thought himself that the case is certainly not one of pus infiltration; that this is shown by the history. A condition remaining for four weeks without any change, any enlargement or breaking down, and without any irregularity of the surface, certainly could not be attributed to an infiltration of pus. For that reason he thought it simply an exudate on or beneath Bowman's membrane, and similar to the case Dr. Eaton had presented some time ago, where methylene blue and protargol made a precipitate that lay between the epithelium and that membrane. The only thing visible that would cause the infiltration is that on the lower margin there is a linear abrasion.

PROPTOSIS.

Dr. G. W. Merritt presented a case of "Proptosis." The patient had come to Dr. Merritt that afternoon, with a history that every time he leaned forward his eye protruded. Dr. Merritt had him lean forward for a considerable time, and the eye did protrude, seemingly a quarter or half an inch. Immediately after assuming the erect posture, divergence of the eyes existed for some five minutes. Examination of the eye and both orbits showed them to be alike, except that the protruding eye was a little congested. Vision in both eyes is $\frac{20}{20}$. Patient could also read the finest print. He had stated that, when any one pressed his neck, it was very sensitive. To-night, after being examined here, he went outside, and was quite pale, and said he could not stand pressure around the neck. Dr Merritt thought there must be some connection between the thyroid and the exophthalmus, but still that should affect both eyes. He thought there might be a plexus of veins behind the eye, which, becoming congested, forced the eye forward.

Dr. L. C. Deane said that Dr. Merritt's case reminded him of a case of angioma connected with the orbit which he had seen some eight years ago in Dr. Knapp's clinic in New York. When erect no tumor was noticeable. When the man stooped over, the tumor enlarged to about the size of a walnut, and seemed to be connected with the circulation of the orbital cavity. Possibly it was quite similar to Dr. Merritt's case, in that there may be an angioma posterior to the globe. Dr. Knapp's case was operated upon, and Dr. Deane recalled that there was a great deal of hemorrhage, but not what the final result was.

Dr. Martin thought it possible that bending the neck over might cause pressure on the cervical ganglia, and thus cause this reflex trouble back of the eye.

Dr. Deane asked whether there was any pulsation when the patient stooped forward.

Dr. Merritt had not had an opportunity to determine this.

Dr. Deane thought that an ophthalmoscopic examination, while the patient was inclined forward, to determine the condition of the blood-vessels of the fundus, the acuity of vision during the protrusion, the field of vision, and the tension, would bring out some important facts. The rotation of the globes before and during the protrusion should also be determined.

Dr. Merritt stated that he had taken the tension, and that it was normal just after but not during the protrusion. When the man raised his head, there was a marked divergence of one eye, which soon returned to its normal condition. There was double vision.

Dr. Deane imagined that the divergence upon assuming the erect position was due to the pressure upon the posterior portion of the eye, which was outward upon the nerve.

DOUBLE KERATOCONUS.

Dr. M. W. Fredrick presented a case of "Double Keratoconus," which he had operated upon on the right eye three years ago, and shown at that time to the society. He showed the patient now because the left is about ready to be operated upon. The operation on the right cornea was done by applying a small, flat electrode, heated to cherry red color, to the apex of the conus until it had reached Descemet's membrane, and then drawing it slowly to the lower outer part of limbus. Vision before the operation was fingers at four feet, and is now $\frac{6}{60}$, with ability to read large type.

WATER SPECTACLES OF LOHNSTEIN.

In connection with this case, Dr. Fredrick demonstrated the water spectacles of Lohnstein for conical cornea, and which he had tried on his patient. It improved vision from 6-60 to 6-12, but the patient refused to wear them, preferring the diminished vision to the discomfort of the apparatus. Dr. Fredrick chose the cautery in preference to ablation of the apex of the conus or trephining, because he thought the result in this case would be better, and it seems that the result justified him. The cornea now has the appearance of keratoglobus. The Javal ophthalmometer shows in the operated eye eight or nine dioptres of irregular astigmatism, which no lens will correct, but the vision is improving.

Dr. R. D. Cohn was glad Dr. Fredrick had shown the Lohnstein apparatus, which the inventor had devised for himself, being afflicted with keratoconus. With it he could read with a good degree of comfort for several hours, and then would lay it aside to rest his eyes. With most people it is so uncomfortable that they refuse to wear it.

Dr. Deane asked how long Dr. Fredrick's patient wore the apparatus, and whether it had any macerating effect on the anterior epithelium of the cornea, and what the sensations were after it had been worn a long time.

Dr. Fredrick said he did not believe there was any macerating effect on the cornea, but that, if the device were tied on tightly enough to prevent dripping of the water, it might cause headache. The main thing is to correctly adjust the apparatus.

The president said he had had some experience with cases of keratoconus. He had tried the conical lenses of de Wecker, but had found them unsatisfactory. The best results he had seen had been from the use of stenopaic slits in spectacle frames.

FOREIGN BODIES IN THE EYE.

Dr. L. C. Deane reported three more cases of "Localization of Foreign Bodies in and about the Globe," and projections and photographs illustrating them. The first case was that just ably presented by Dr. Brady The next case was referred by Dr. Pischel for localization. The patient is a miner, and some six years ago was struck with a chip of steel, which, although he was unaware of it, entered the globe. A year later a cataract developed, and was removed by a surgeon, who was unaware of the presence of the foreign body. Some reaction followed the operation, with no improvement of vision. Patient consulted Dr. Pischel later, who found the eye hard and painful, with incarceration of iris in the old corneal wound. He placed the man before the Haab magnet. The pain reaction was marked, and some attractive force exerted upon the eye, which conclusively showed the presence of steel or iron. The photographs and projections show its location exactly. It was removed by the magnet through a scleral wound, made according to the position indicated. The third case is one of a little boy who was shot in the eye by a shotgun at distance of forty-five feet, the shot penetrating the right side of the head, and two shot entering the eyeball. This was six weeks ago. The little fellow was confined to his bed with a severe orbital cellulitis and fever, and the eye was in an advanced stage of uveitis. The background could not be seen; in fact, the eye was destroyed. It was necessary to determine whether the shot were in the eyeball or orbit. and in what part, so as to determine the cause of his orbital cellulitis. The two photographs demonstrate the case. Two shot were found to have passed through the globe. One was lodged four mm. posterior to the globe, and resting upon the optic nerve. The other was found to have entered the superior portion of the globe, passed through it, and lodged itself in the orbital cavity superior to the eyeball, and on about a vertical line drawn through the posterior pole. The projections show this more accurately. The fourth case was referred to Dr. Deane, by Dr. Payne, to locate a piece of steel imbedded somewhere in the eye or orbit. The young man, some four weeks ago, was hammering a pipe above his head, when he felt a sharp shock in his eye, and was dazed for a little while. He suffered with photophobia for three or four days, then took off the bandage and saw as usual. Later a cataract developed. He was placed before a Haab giant magnet, and no pain reaction was felt; so it was concluded that no steel was present. The case was referred to Dr. Deane, who localized a piece of steel in the eye, 2 mm. by 1 mm. in size, resting upon the floor of the eye, 3 mm. posterior to the equator. The eye was placed before the Haab magnet, and an incision was made exactly at the spot indicated in the diagram. The giant magnet was entered, and the piece of steel extracted exactly where it was localized. Dr. Deane thought that this last case, with the second one presented, proved conclusively the character of this method and its value when the application of the Haab giant magnet and all other measures had failed to extract the foreign bodies.

THE PUBLIC HEALTH ASSOCIATION OF THE STATE OF CALIFORNIA.

The first meeting of this new organization was held on April 15, in the office of the Board of Health of San Francisco. After reading the report of the committee on organization, which appears below, the following program was offered and successfully carried out. Some of the papers appear in this issue, and as the discussions were not recorded, we offer as a substitute several of the many letters received from all parts of the state, encouraging those assembled in their noble effort at stemming the advance of contagious disease.

REPORT OF COMMITTEE ON ORGANIZATION.

Your committee on permanent organization begs to report as follows:—

1. This society shall be known as the Public Health Association of the State of California.
2. Its membership shall consist of all members, past, present, and future, of all Boards of Health in the state of California, as well as all county and municipal health officials.
3. That the organization will hold an annual meeting at a place to be decided upon by the members of the society, and upon the Monday preceding the annual session of the Medical Society of the State of California.
4. The officers of the association shall consist of president, first and second vice-presidents, and a secretary-treasurer, and an executive committee, to consist of the officers above mentioned and three members to be selected by the chair. All officers mentioned will serve for the term of one year, or until their successors are properly inducted into office.

Chairman, A. P. O'Brien, M. D.,
J. H. Kuser, M. D.,
John M. Williamson, M. D.,
Wm. Simpson, M. D.

PROGRAM.

"Milk Production under Hygienic Conditions," by Prof. A. R. Ward, of the University of California. Discussion by Prof. Leroy Anderson, U. C., Mr. Glazier, and others. (Published at page 178.)

"Food Inspection," by Fred E. Pierce, D. V. S., City Meat Market and Milk Inspector, and Veterinary Surgeon of Oakland. Discussion by Dr. W. C. Hassler, Chief Sanitary Inspector, San Francisco: Major Robertson, Chief Food Inspector, San Francisco; and others.

"Diphtheria Regulations," by Dr. W. H. Kellogg, City Bacteriologist, San Francisco. Discussion by Dr. H. A. L. Ryfkogel, of San Francisco, and others.

"Smallpox," by Dr. H. E. Southworth, of Stockton. Discussion by Dr. J. T. Kitchings, of Oakland; Dr. J. G. Morrisey, of San Francisco, and others.

"Tuberculosis Regulations," by Dr. Edward von Adelung, and by Dr. Wm. Simpson, Health Officer of Santa Clara County. Discussion by Dr. Wm. S. Porter. (Published at page 176.)

"Venereal Diseases," by Dr. J. M. Williamson, of San Francisco. Discussion.

Special business.

LETTERS.

Dr. Wm. Simpson, San Jose: In considering the relation of the health office to consumption, I shall call your attention briefly to a few points. First, so far as Santa Clara is concerned, the death rate is not increasing, and the number of deaths, in view of the steady increase in population, shows, on the other hand, a decided decrease. In 1898 the deaths from consumption numbered 47, as against 93 in 1890, with a much smaller population, and 84 and 81 in the years 1891 and 1892, when grippe was prevalent, and the death rate was the largest San Jose or Santa Clara County has ever known. The deaths by years are as follows: 1890, 93; 1891, 84; 1892, 81; 1893, 54; 1894, 54; 1895, 60; 1896, 61; 1897, 60; 1898, 47; 1899, 67; 1900, 63; 1901, 59. I believe it is fair to claim that this decrease is due partly to improved methods of treatment by physicians, partly to the inspection of food products by the city and county health officers, and partly to the improved sanitary measures and conditions; and this points out plainly the duty of the health officer to rigidly enforce every sanitary precaution that will increase the resisting power of the community, and therefore of the individual. So it is not necessary to note what a New York paper has christened "phthisis-ophobia," a dread of consumption that the members of a state, town, hamlet, or family are in fear of each other. The health officer is, or always should be, a physician, and as such must remember that the physician owes much to his patient, and can not sacrifice his patient's chance of recovery to the remote possibility that some other person may acquire the disease, if this particular patient is not informed of the exact status of his disease and separated at once from not only his friends, but from hope itself. Such action must be considered an unwarranted and unjustifiable cruelty, and in many cases would mean the pronouncing of his death sentence on many a sensitive patient, lessening by fear his resisting power, every particle of which is needed in the battle with disease. The quarantining of diphtheria, smallpox, or scarlet fever means but a few days', or at most a few weeks', inconvenience, followed by a distinct sense of satisfaction, when recovery takes place, that future immunity is secured. No such hope for the consumptive. Once quarantined, he is marked for life and a suspect forever, for no doctor's certificate will satisfy the public in his case. Is consumption contagious?—Yes. Is it virulently contagious, like smallpox, or even measles and whooping-cough?—No. Are precautions necessary?—Most emphatically yes. What shall they be?—The constant urging upon medical men and laymen of the necessity of receiving all catarrhal discharges in water; the handkerchief not to be allowed to dry, but to be dropped into boiling water or an antiseptic solution, and the regular and systematic disinfection of the room occupied by every person suffering from acute or chronic catarrh, laryngitis, or any disease by whatsoever name it may be called, which has as a symptom coughing, expectoration, or catarrhal discharges of any kind. In these measures we may look for the help of the profession, the laity, and, if we need it, of the state and nation. In attempting more drastic measures, we must look for opposition, for evasion, for bitterness, and failure.

Wm. D. Simpson, M. D.
County Health Officer, Santa Clara County, San Jose.

Dr. W. Lester Wilson, Milpitas: I regard tuberculosis as a contagious disease. Being easily communicated from one person to the other, something should be done to separate persons suffering with tuberculosis from healthy persons, or those that are free from the disease. I do not know that I have any suggestion to make as to how this should be done, but I think that a person suffering from tuberculosis should not be permitted to mingle with other persons freely, as they do at the present time, any more than a smallpox patient is permitted to do so. Tuberculosis kills more persons than any other disease that the human family is heir to, and it is on the increase; hence something must be done to stop the advance. And how can it be done unless we segregate those suffering from the disease?

Dr. L. J. Belknap, Garden City: In answer to your inquiry concerning the duty of the health officer in relation to the public and tuberculosis, it is my opinion that the matter should receive prompt attention and the public mind be so aroused and educated that they may recognize the danger lurking about our very door, by way of contamination with tubercular germs. At present there are no restrictions whatsoever being enforced in regard to the promiscuous expectorating upon the sidewalks, parks, or lawns of our city. When smallpox strikes a city, everybody is aroused, and an exodus takes place, schools are closed, and all is excitement. See the comparison; more deaths are due to tuberculosis than to smallpox, measles, diphtheria, scarlet fever, chicken-pox, croup, and typhoid fever, according to the best statistics of Europe and America. I believe that the health officers and physicians in general should so place these matters before the public that this dread disease may receive the attention it deserves, and proper state and county sanitaria established to properly care for these cases, as is being done in the east in many states, where not only the climatic conditions are favorable, but where proper treatment can be instituted.

Tuberculosis in a large per cent of the cases is curable not by drugs or antitoxins, but by physiological medicine,—sunlight, fresh air, dietetics, etc. The sanitary regulations are already telling upon the mortality in these cases, sufficient at least to stimulate us as physicians to make a vigorous effort to stamp out this the greatest enemy we have to combat to-day. The state Legislature should, by cooperation with the cities, towns, and counties, interest themselves in this matter, and give the necessary aid to the health officers to properly carry out such regulations as a careful study of the subject deserves.

Dr. Leonard Stocking, Agnews: Yours in relation to tuberculosis in state hospitals received, and should have had an early reply. I hope, however, it may not be too late, if a few thoughts from me may be of any service to you. There has been no provision made in this state for the isolation of the tuberculous insane in state hospitals. As long as the consumptive is able to be up and about, he mingles freely with the other patients during the day on the ward, in the dining-room, and on the recreation grounds. At night, so far as we can, we sleep them by themselves, especially after the disease is pronounced and expectoration free. When the disease has so far progressed that it is necessary for them to remain in bed, we keep them in a single room; but such room opens off from and communicates with a ward where there are day and night fifty or sixty other insane patients. We have all clothing and bedding frequently changed, and, when spoiled with sputa, promptly removed. The floor, walls, bedsteads, etc., are frequently cleansed, and disinfectants and antiseptics are freely used. We exercise all precautions possible under the circumstances to protect our other patients against the sputa of our tuberculous patients. A very large proportion of insane patients affected with tubercle, however, are extremely careless, untidy, and perverse, and can not be controlled in their habits or prevented from expectorating everywhere in the most untidy manner. The best we can do is to constantly watch and clean and try to never permit the sputa to remain long enough *to dry.* In attempting to provide a separate and isolated building or ward for insane consumptives, we encounter the difficulty of classifying all consumptives together, owing to their varying mental conditions. It would be possible, however, at sufficient expense, to so build and arrange a separate building that this could be done; and, in my opinion, such provision ought to be made. Still, in very few hospitals for the insane throughout the world has provision been made to segregate the consumptives. The first one to be established in this country, and the only one, unless others have been added during the last three years, was in connection with a hospital in Illinois, with which I was connected for several years. It was built more for the purpose of separating the consumptive insane from the non-tuberculous, for the protection from contagion of the latter class from the former, than for special treatment of the tubercular condition. It is faulty in arrangement, and does not serve the purpose well for caring for the various mental types of the consumptive insane; but those now in charge report that they derive much benefit and satisfaction from the use of this cottage in caring for this class of insane. They claim that the contamination of other patients is much lessened and the mortality of afflicted patients reduced. Patients are removed to this building only when the disease is evident by physical signs. Though no cures are attempted or expected, this unfortunate class are made more comfortable in their isolation than they could be in contact with and contaminating others. One great consideration in isolating the consumptive insane would be the lessening of the danger of sending mentally-restored or improved patients to their homes infected with consumption. Taking two years as a sufficiently long period to average results, I will state that during two years the hospital for the insane at Stockton had a total of 305 deaths from all causes, of which number 86, or 28.2 per cent, died of tuberculosis. During the same period Napa had 232 deaths; 42, or 18.1 per cent, of the number died of tuberculosis; Agnews, 150 deaths, 17, or 11.3 per cent, of which by tuberculosis; Mendocino, 106 deaths, 17, or 16 per cent, by tuberculosis; southern California, 94 deaths, 12, or 12 per cent, by tuberculosis. In all the California state hospitals for the insane during the two years there was a total of 887 deaths, of which 174, or 19.62 per cent, were due to tuberculosis. How the relative number of tubercular deaths to all deaths in the hospitals for the insane compares with the same relation of deaths outside of such institutions, I will leave for you to determine. In the comparison is there argument for or against the contagious character of the disease? In the asylums we have intimate or close association, at least in early stages, and more or less through all stages. We have an extremely careless and ungovernable class, so far as their habits are concerned, who are utterly oblivious to the necessity of protecting others. On the other hand, they are completely under our control, so far as they can be controlled, and we can direct absolutely their care and management. That we do not have a much larger per cent of tuberculosis is perhaps largely due to the prevention of accumulation of dry sputa. The relation of tuberculosis and insanity is interesting, but its discussion would be too lengthy for this letter. It might serve as a text for an extended paper. That there is an intimate relation, abundant evidence exists.

The success of this initiatory step was highly satisfactory to the proposers of this much-needed association, which it is hoped will instil into the hearts of the health officers of our counties and cities a greater sense of duty, a more efficient and a more stringent enforcement of the law and health regulations in matters of such vital concern to ourselves and the people.

Dr. A. Von Adelung, Oakland, was chosen president, and James A. Emery, secretary of the San Francisco Board of Health, secretary for the ensuing year.

MEDICAL NEWS.

INTERNATIONAL MEDICAL CONGRESS.

The fourteenth International Medical Congress will be opened in Madrid, Spain, on April 23, 1903, and close on the 30th of the same month.

Dr. Abraham Jacobi, having been requested by the officers of the Congress to form the American Committee, has arranged that the plan devised by Dr. William Osler, which worked so well in preparation for the thirteenth congress, shall be followed also for the fourteenth.

Invitations to accept places on the committee have therefore been sent to the president of the American Congress of Physicians and Surgeons, the president of the American Medical Association, the presidents of the fourteen constituent societies and associations of the American Congress, the surgeons general of the Army, Navy, and Marine Hospital Service, the president of the Canadian Medical Association, and the president of the National Dental Association. Acceptances have been received from nearly all of those invited.

Dr. Howard A. Kelly, of Johns Hopkins University, will deliver the address at one of the general meetings of the Congress, and has chosen for his subject "The Passing of a Specialty."

Dr. Ramon Guiteras has been appointed delegate to the Congress by the New York Academy of Medicine.

The committee to date consists of W. W. Keen, M. D., of Philadelphia, President of the American Congress of Physicians and Surgeons; John C. Wyeth, M. D., of New York, President of the American Medical Association; R. H. Chittenden, M. D., of New Haven, President of the American Physiological Society; Walter S. Christopher, M. D., of Chicago, President of the American Pediatric Society; Joseph Collins, M. D., of New York, President of the American Neurological Association; John W. Farlow, M. D., of Boston, President of the American Laryngological Association; Samuel A. Fisk, M. D., of Denver, President of the American Climatological Association; S. C. Gordon, M. D., of Portland, Maine, President of the American Gynecological Society; Geo. T. Jackson, M. D., of New York, President of the American Dermatological Association; Horace G. Miller, M. D., of Providence, President of the American Otological Society; Presley M. Rixey, M. D., of Washington, Surgeon-General of the Navy; F. J. Shepherd, M. D., of Montreal, President of the Canadian Medical Association; George M. Sternberg, M. D., of Washington, Surgeon-General of the Army; O. F. Wadsworth, M. D., of Boston, President of the American Ophthalmological Society; DeForest Willard, M. D., of Philadelphia, President of the American Surgical Association; H. August Wilson, M. D., of Philadelphia, President of the American Orthopedic Association; James C. Wilson, M. D., of Philadelphia, President of the Association of American Physicians; Walter Wyman, M. D., of Washington, Surgeon-General of the Marine Hospital Service; Abraham Jacobi, M. D., of New York, Chairman. John H. Huddleston, M. D., Sec.

126 West 85th St., New York City.

The American Association of Urologists was organized on February 22, 1902, essentially for the purpose of further development of the study of the urinary organs and their diseases. Although most of the founders of the association are specialists in genito-urinary diseases, the membership is not limited to those engaged exclusively in this specialty. Thus gynecologists who embrace renal and vesical surgery in their work, are among the founders, as are also several gentlemen who devote themselves to the microscopy and chemistry of the urine, as well as a number of practitioners interested in the study of the kidney from a medical standpoint. The association consists of active, corresponding, and honorary members, and is in great measure modeled upon the plan of the Societe Francaise d'Urologie, modified to suit American circumstances and conditions. Whenever possible, the branch associations throughout the United States, British possessions, and Spanish America, will hold their meetings on the same evenings as does the parent association in New York (the first Wednesday in each month). The work of the association is principally clinical, for the demonstration of new methods in the technique of examination and treatment. The annual meeting of the American Association of Urologists will be held on the last day and the day following the annual meeting of the American Medical Association. The officers of the association are: Ramon Guiteras, M. D., president; Wm. K. Otis, M. D., vice-president; John Van der Poel, M. D., treasurer; Ferd. C. Valentine, M. D., secretary; A. D. Mabie, M. D., assistant secretary.

HOSPITAL REPORTS.

Gynecological Clinic, Cooper Medical College, Geo. B. Somers, M. D., in charge.

Reported by Minora E. Kibbe, M. D.

ROUTINE CLINIC TREATMENT—LOCAL.

Though the general health is cared for, most of the treatment is naturally local. By making judicious use of the different gynecological positions, pelvic examinations and topical applications are more easily and effectively made. The dorsal position is the most commonly used, patient being either recumbent or in the dorso-sacral position, i. e., with the limbs completely flexed. With the Sims position, the speculum is held by a nurse and the anterior wall of the vagina pushed aside with the vaginal depressor. In this position the cervix can be grasped and thoroughly explored and treated. With very fleshy women, and when the cervix is hypertrophied, this position is of great service. The knee-chest position is very important, owing to its effect on the position of the uterus. It allows the pelvic organs to fall forward toward the diaphragm; at the same time air is sucked into the vagina and it balloons out, showing well the contour of lacerations about the introitus and permitting free inspection of cervix and vault of vagina. By retracting the perineum the cervix can be treated and tampons packed behind the uterus to hold it in place. In making examination where diagnosis of pelvic tumors is difficult, Jayle's position allows the contents of the abdomen to fall away from the pelvis, leaving room to distinguish the different organs and to make out their pathological condition. It is a combination of the dorsosacral and Trendelenberg positions. A special table with one end elevated is used for this position. The routine solutions employed are nitrate of silver 2-4 per cent, astringent and sedative; formalin, 2 per cent in glycerin, antiseptic and dehydrating; lysol, ½ to 1 per cent, antiseptic; boric acid, also antiseptic; ichthyol, 10 per cent in glycerin, as an alterative, and the different preparations of iodin. The plain tincture contains alcohol and is used for its antiseptic alterative and astringent effect. Churchill's tincture is stronger and more resolvent, the iodin being held in solution by the presence of iodid of potassium. In Lugol's solution the iodin is also held in solution by the addition of potassium iodid. It is used for its alterative effect because the iodin is not precipitated on coming in contact with the water of the tissues. It therefore penetrates deeper than the alcoholic preparations. Tampons applied in the vagina are made of four-inch squares of fluffy absorbent cotton or lamb's wool folded and tied by a string about five inches long. The absorbent cotton tampons are soaked lightly with glycerin. The lamb's wool tampons are covered with a thin layer of absorbent cotton to prevent irritation by the wool fibers and then they are well dusted with boric acid. They do not become clogged with secretion and serve to keep the medicated tampons in place with little weight or pressure. The patient is advised to wear a pad, as the moist tampons cause considerable fluid to come away. In treating conditions about the vulva, such as pruritus, herpes, chancroidal ulcers, and condylomata, the parts are first washed with green soap and dried. Nitrate of silver or formalin in glycerin is then painted over the affected surfaces and borated talcum powder dusted on. For vaginitis and slight leucorrhea a lysol douche ½ to 1 per cent is given and then nitrate of silver or tincture of iodin is used. Copious douches are given at the clinic and directed to be taken at home. Sometimes solutions of borax or carbolic acid are used. The following prescription is given to be used at home:—

℞: Alum sulph.
Zinc sulph.
Borax ....aa ℥j
Sig.: ʒij to quart of water as douche.

The cervix, if hypertrophied or cystic, is scarified and painted with Churchill's tincture of iodin, and a glycerin tampon inserted for its derivative action. The same applications are made to ulcerations about the cervix and to eversions of the mucous membrane. Gonorrhea is treated with most copious hot douches and applications are made within the cervix with any of the astringent antiseptic solutions mentioned. Douches of lysol solution at a temperature of 105 degrees to 110 degrees are advised to be taken at home in amounts from two quarts to two gallons, three or more times a day. Later ichthyol tampons 10 per cent in glycerin are inserted in vagina. For endometritis, metritis, and subinvolution, applications of Churchill's tincture, Lugol's solution, or formalin and glycerin are made into the uterine canal and about the vaginal vault and the vagina is packed with glycerin and boric tampons. When these cases do not heal readily with such treatment curettment is advised. In cases of retroversion where pessary can not be worn because of inflammatory or sensitive areas, ichthyol tampons are packed behind the uterus with the patient in the knee-chest position. Where there is prolapsed and painful ovaries or where chronic ovaritis or salpingitis exists, if the patient declines operation, the vaginal wall is painted with Lugol's solution and ichthyol tampons are applied in the vagina against the affected part. This reduces the inflammation and pain somewhat, but is only palliative. For irritable bladder enuresis, irrigation with distension of the bladder is carried out. The capacity of the bladder is increased to 16 or 20 ounces if possible. A 4 per cent boric-acid solution is used daily or every second day, the bladder being flushed two or three times. Granulations and excoriations about the meatus are touched with weak solution of nitrate of silver.